

South Fremont/Warm Springs Area Studies

Appendix A: Baseline Market Analysis



Economic & Planning Systems, Inc.



STRATEGICECONOMICS

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I. EXECUTIVE SUMMARY

Purpose

The initial baseline market trends assessment provides market information to evaluate and judge the potential for the reuse and redevelopment of the South Fremont/Warm Springs Study Area in the short and long term. This baseline market trend report provides an understanding of current conditions as well as emerging opportunities by building from previous studies completed by the Economics Team and using the latest market information, data and key informant feedback.

Major Conclusions

Residential

- Fremont is one of the strongest housing markets within its local trade area, with residents drawn to the quality schools and neighborhoods within a bargain-priced city relative to the Central Bay Area.
- Demand for condominium and apartment housing is gradually increasing in Fremont, but demand is strongest for single-family homes and other family-friendly housing. Condominium demand is likely to increase when single-family home prices increase.
- Regional housing demand and diminishing supplies of developable land will result in long-term price increases and increasingly dense products, including small-lot single-family homes, townhomes, condominiums, and apartments.
- The market is supplying a limited number of higher-density condominium, townhouse, and apartment building types compared to older, large suburban models, but these new buildings are currently too scattered and located along busy automobile corridors to generate a TOD-style neighborhood.
- Projections indicate demand for between 3,900 and 5,900 compact, TOD housing units over the next 25 years in Fremont. ABAG projects additions of 14,880 new households in Fremont over that same period.
- Capture of TOD housing market segments will depend on concentrating denser developments within one or two walkable and transit-accessible areas, and addition of nonresidential uses (e.g., local-serving retail) that generate a value premium for these areas.
- Early development near the BART station area would likely be limited to below 30 dwelling units per acre because of financial feasibility constraints. More transit-supportive densities would not be achievable in the short term.

Retail

- There is a mismatch between consumer preferences and existing retail creating demand for high-end retail in an urban format.

- There is long-term demand for between 3.9 million and 4.9 million square feet of retail in Fremont.
- Much of this demand could be filled by adding to existing retail centers such as Pacific Commons and in Midtown.
- Pruning of dispersed retail located outside of existing clusters is necessary to strengthen key retail nodes that focus on good locations and a strong tenant mix, and create a critical mass.
- Midtown is the best location to focus efforts to develop an urban shopping district.
- Since financial feasibility issues hamper the addition of a significant amount of rooftops in the study area and the City has identified Midtown as a priority, near- to mid-term retail development in the study area should focus on community-serving retail. The retail format (i.e., mixed-use, stand-alone, strip) will be driven by physical context and placemaking goals.
- Highway access and visibility to certain parcels in the study area mean that it could be a good location for regional retail in the long term, depending on surrounding uses.

Hotel

- Strong regional access and good highway visibility make it an ideal location for Midrange and Economy hotels.
- Hotel growth in the area is tracked with regional employment growth, with large increases in the 1980s and 1990s. The sharp decline in construction in the 2000s is most likely tied to a similar decline the technology sector.
- Demand for hotels has been slow over the past decade and no new hotels have been built since 2002.
- Occupancy rates over the past six years have been modest and have not risen high enough to suggest unmet demand exists in the trade area.
- While there is limited demand for hotels in the short term, there could be demand for up to an additional 2,200 rooms or 15 hotels over the next 30 years.
- Given that this market service primarily business travelers, growth in employment is a likely prerequisite for hotel demand to increase.

Office

- The City of Fremont has historically attracted a dispersed range of small office users distributed throughout the City's numerous business districts.
- The City Center represents the primary cluster of Class A office space with densities approaching transit-supportive levels. It also represents the primary cluster of health services with hospitals, medical office, and other health service providers located in the area.

- Future office development in the City of Fremont will be driven by demand from growth in the health care services cluster for medical office space as well as by growth in the professional and financial services cluster.
- Job forecasts suggest the addition of 10,700 jobs requiring office space and 3,000 jobs requiring medical office space between 2010 and 2035. This represents a potential demand for 2.9 million square feet of office space and 800,000 square feet of medical office space.
- New Class A office space users, in the short and medium term, will occupy existing vacant space in the City Center and new development in Midtown, which provides the opportunity for development of up to 2 million square feet of new office development.
- The majority of demand for Class B/C office space is expected to locate in smaller existing and new buildings in the different business districts.
- The alternative locations for office development in the City, combined with the current industrial character of the Study Area, suggest a limited short- and medium-term demand for office development at transit supportive densities around the Warm Springs BART station.

R&D/Industrial

- The City of Fremont has a long history of accommodating a diverse range of industrial businesses that collectively provide a significant numbers of jobs and sales tax revenues to the City.
- The City currently has a significant supply of R&D space (over 20 million square feet—63 percent of I-80/880 Corridor R&D space) as well as about 9.6 million square feet of manufacturing space and 8.0 million square feet of warehouse/distribution space.
- The computer/communications manufacturing, clean technology, biotechnology, and logistics/distribution represent strong industry clusters for the City.
- Job forecasts suggest the addition of 5,600 jobs in R&D Flex space and about 10,000 jobs requiring manufacturing/warehouse and distribution space. This represents a potential demand for about 9.5 million square feet of R&D/industrial space through 2035.
- The City's three core industrial areas—Ardenwood, Baylands, and Warm Springs—each offers vacant development capacity that is collectively more than sufficient to meet the net additional demand for industrial land of over 400 acres through 2035.
- Ardenwood and Baylands subareas provide important components of the City's industrial development capacity, though alone do not offer sufficient vacant land to accommodate this potential new demand.
- A significant portion of the Warm Springs area could remain a critical component of the industrial backbone of the City attracting new R&D, manufacturing, and logistics/distribution uses to areas buffered from other uses and offering some large parcels.

Methodology and Assumptions

The initial baseline market trends assessment provides market information to evaluate the potential for reuse and redevelopment of the South Fremont/Warm Springs Study Area in the short and long term. The report relies on a variety of data sources and background work, including the Industrial Land Use Analysis for the General Plan (2008), the Fremont Market Analysis and Retail Study (2008), and the Fremont Economy: Present Realities and Future Possibilities (2001); latest real estate brokerage report information; the most current regional and local projection data sets; and other economic and market information. To round out the quantitative research, the Economics Team also conducted one-on-one and group interviews with local real estate brokers, developers, property owners, City staff, and business leaders to inform an understanding of current conditions as well as emerging opportunities.

This analysis relies on a number of assumptions and caveats including;

- Zoning in the study area could be amended to any of the land uses studied below.
- Local and regional population and employment projections generated by the Association of Bay Area Governments (ABAG) are accurate.
- Current or future owners would be inclined to develop the land in one of the land uses analyzed below when feasible from a market perspective.
- Compatibility of adjacent land uses was not considered.
- Financial feasibility was not considered. While some basic information about financial feasibility was available, a full feasibility analysis will be addressed in a future task.

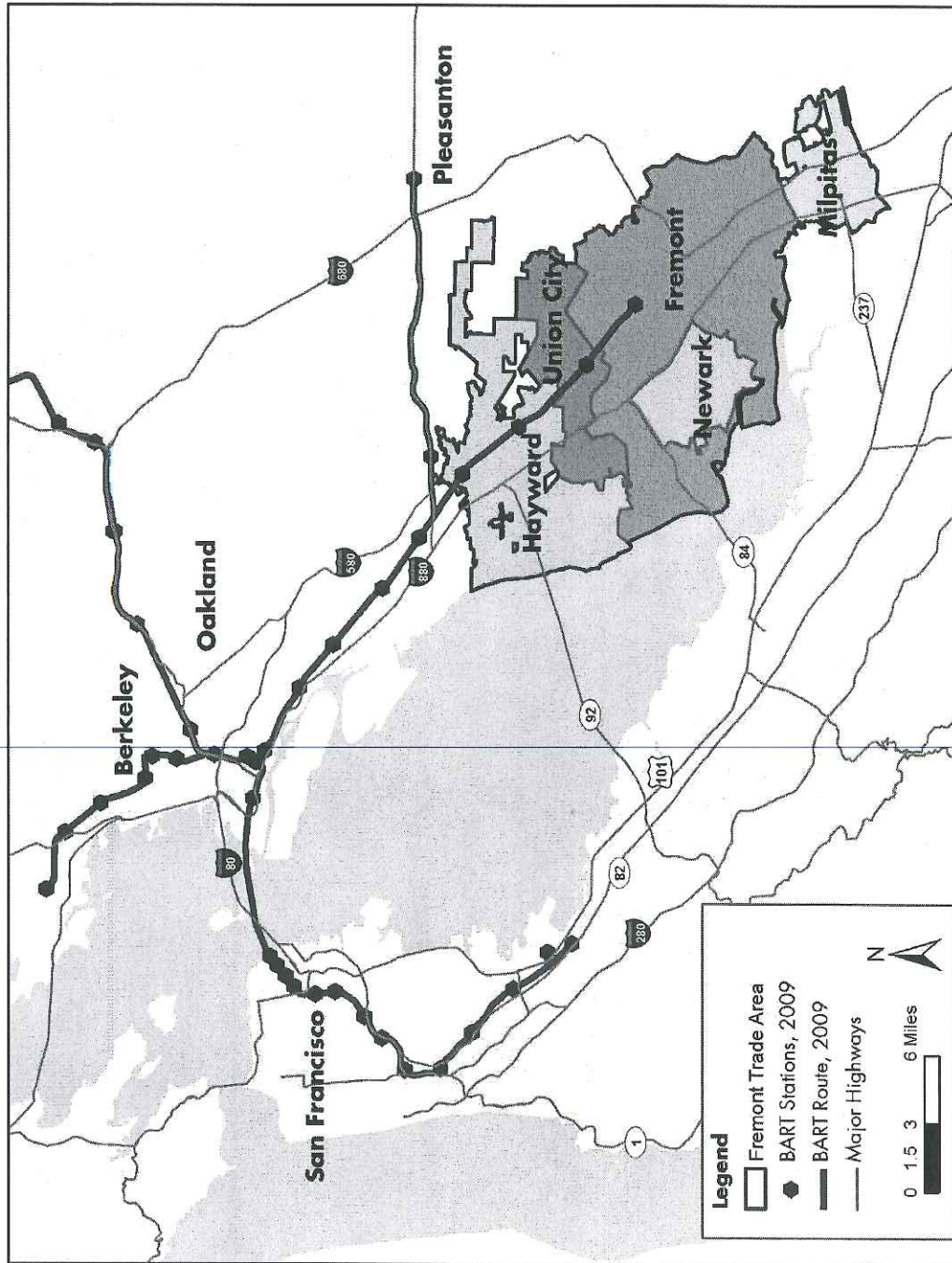
II. RESIDENTIAL

This chapter provides an overview of past, current, and future trends of the housing market in Fremont. Findings are based on the latest market and supply data sources and key informant interviews.

Trade Area

As with any city in the Bay Area, Fremont competes for residents from across the entire region. Locally, however, Fremont competes within a primary trade area encompassing the nearby cities of Newark, Union City, Hayward, and Milpitas. Brokers stated during interviews that buyers and renters searching for housing in the southern East Bay are most likely to compare these cities since they offer similar attributes; i.e., each is centrally located to particular employment centers, contains a high share of single-family and low-density multifamily housing stock, and most are known for being family-oriented and providing quality neighborhoods and school systems relative to the price of housing. See **Figure 1** for a map of the trade area.

Figure 1: Map of Fremont Residential Trade Area



Source: Strategic Economics, 2010.

Existing Supply and Trends

Fremont has a diverse housing stock totaling 72,000 units, including detached single-family, attached single-family, and multifamily housing types. Detached single-family homes comprise 60 percent of units, with another 10 percent of units located in attached single-family homes. The remaining 30 percent of units are located in multifamily apartment or condominium buildings (see **Figure 2**).

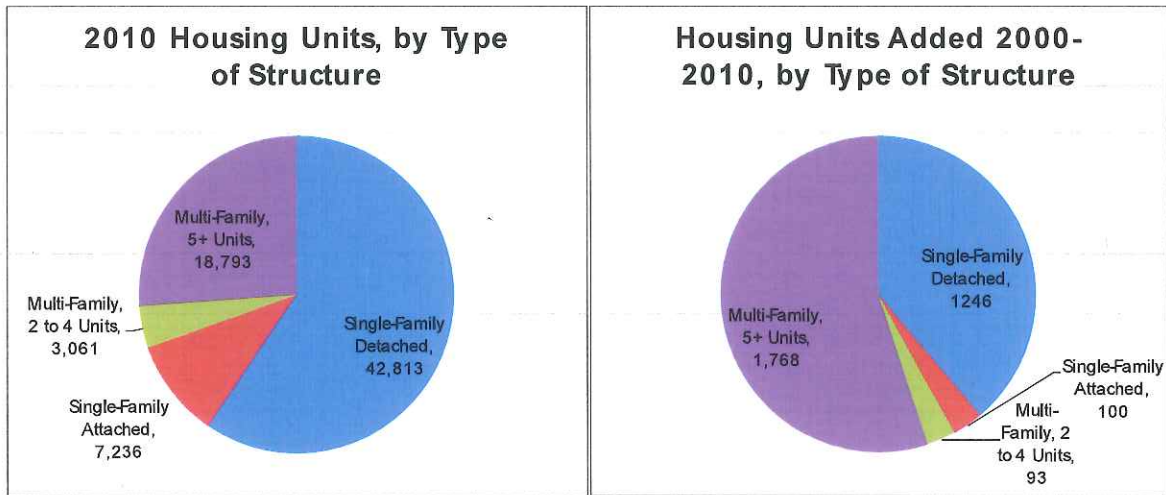
Recent construction trends show that multifamily unit construction now outpaces single-family construction. According to the California Department of Finance, 58 percent of units added in Fremont between 2000 and 2010 were located in multifamily structures, while attached and detached single-family homes only comprised 42 percent of new units (see **Figure 2**). Housing either currently being built or planned for construction will continue the trend of multifamily housing construction, as shown in **Figure 3**. Despite the trend, single-family detached homes still comprise a significant share of planned units.

The Economics Team examined final construction permit counts in Fremont to determine approximate absorption under recent market conditions. As shown in **Figure 4**, Fremont issued a peak of approximately 600 final permits during strong market periods in 2000-2001 and 2004-2005, a minimum of 80 in 2003-2004, and a ten-year average of 320 permits annually. Given this prior performance, it is reasonable to assume that Fremont can maintain a long-term average annual absorption of 250 to 350 units. The current extreme trough in the housing market cycle suggests that recovery may take several years, and average performance may ultimately skew closer to the low end of this range if lending standards and regulations become and remain more stringent over the long-term.

Review of existing and recent developments indicates that a gradual shift is occurring toward denser housing types in Fremont. Aside from a few large remaining parcels of residential-zoned land near the Bay, Fremont is now largely built-out. The diminishing supply of developable land is encouraging development of more compact housing units. Fremont condominiums were historically developed as large-site, multi-building, two- to three-story self-contained complexes consisting solely of residences and amenities such as a clubhouse and pool; in contrast, planned development data shows retail components in several higher-density multifamily developments located in small, central infill locations such as near Mowry Avenue and Fremont Boulevard. New single-family home developments also tend to be built on small lot sizes and often include a mix of condominiums. However, these new developments are providing a small number of units relative to total housing stock and are too scattered to create critical mass to generate a neighborhood in which daily goods and services are easily and comfortably reached on foot.

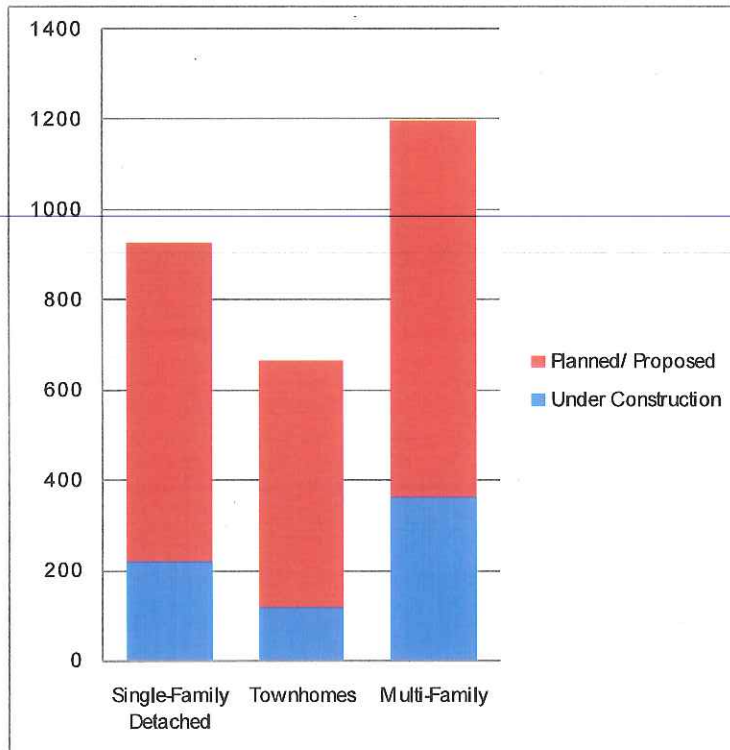
Despite its increasing housing diversity from greater multifamily unit construction, Fremont firmly remains a community of single-family residences. The approximately 3,800 multifamily and townhome units constructed or planned for construction since 2000 will make up approximately 5 percent of the City's housing stock, while another 2,200 single-family homes have been constructed or are proposed for construction over the same period—although review of recent housing developments shows that smaller lot sizes are also becoming common for these homes. The 60 percent share of detached single-family housing stock is unsurprising given that Fremont competes for residents partly based on its exceptional school system and that—as with the surrounding trade area—half of City households include children.

Figure 2: Comparison of 2010 Fremont Housing Stock and Units Constructed 2000 to 2010



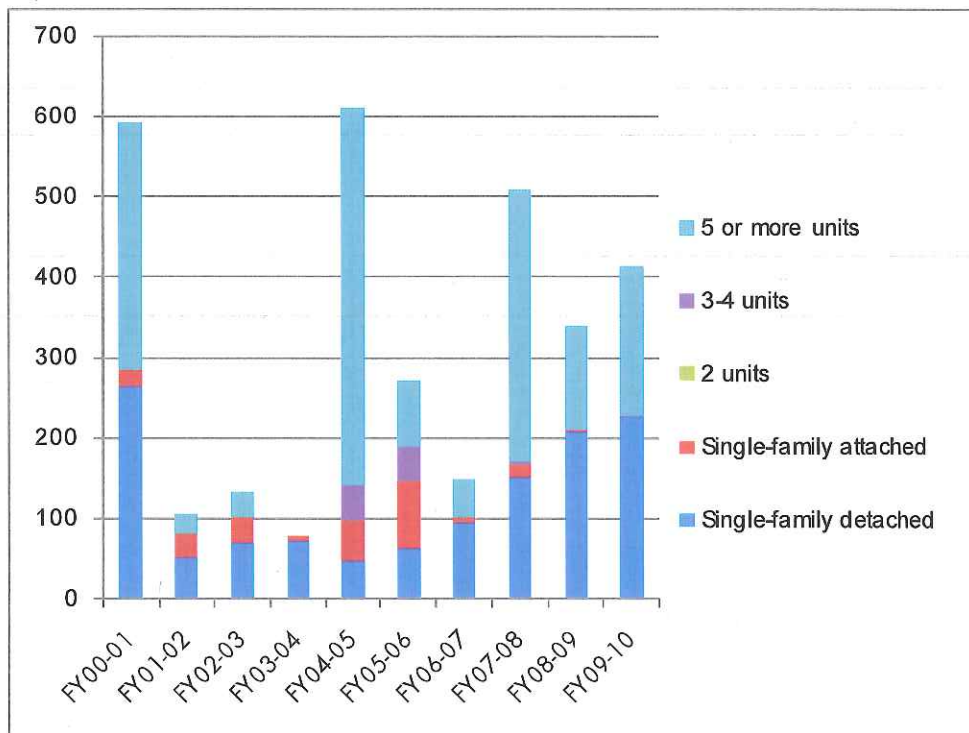
Source: California Department of Finance, 2010; Strategic Economics, 2010.

Figure 3: Planned/Proposed or Under Construction Fremont Housing Units



Source: City of Fremont, 2010; Strategic Economics, 2010.

Figure 4: Annual Final Unit Permits, by Number of Units in Structure and Structure Type



Source: City of Fremont, 2010; Strategic Economics, 2010.

Market Performance

Ownership Product

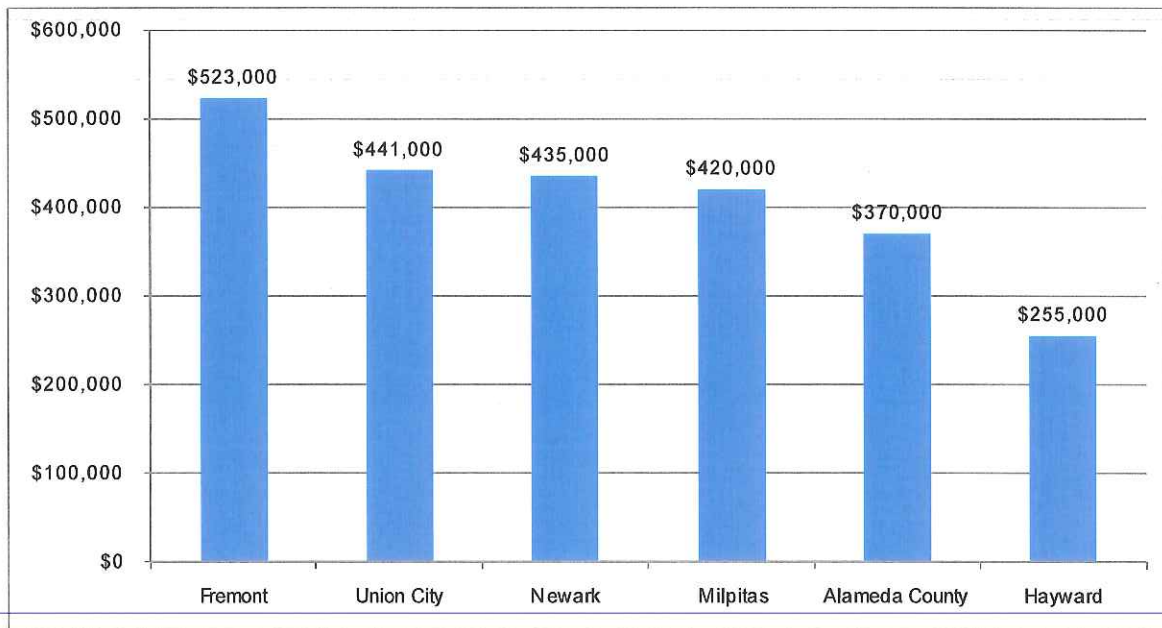
The overall ownership housing market in Fremont is characterized as follows:

- Relatively strong market within the local trade area.
- Price performance tracks the trade area, but is recovering more rapidly than other trade area cities.
- Single-family homes are most heavily favored.
- Condominiums sales tend to lag single-family homes.
- Most existing condominiums are of a similar low-density, residential-only design as single-family homes and therefore offer little added value when competing with single-family homes.
- Denser condominiums and single-family residences have begun to be built, including some with retail components.
- Only a critical mass of denser residences with adjacent retail will offer a differentiated product and increase the added value of purchasing such residences.

According to real estate data service Dataquick, the median sales price in Fremont is currently higher than Alameda County and the four other cities within Fremont's trade area (Union City, Newark, Milpitas, and Hayward). This pattern has held true over time, as shown in **Figure 5**.

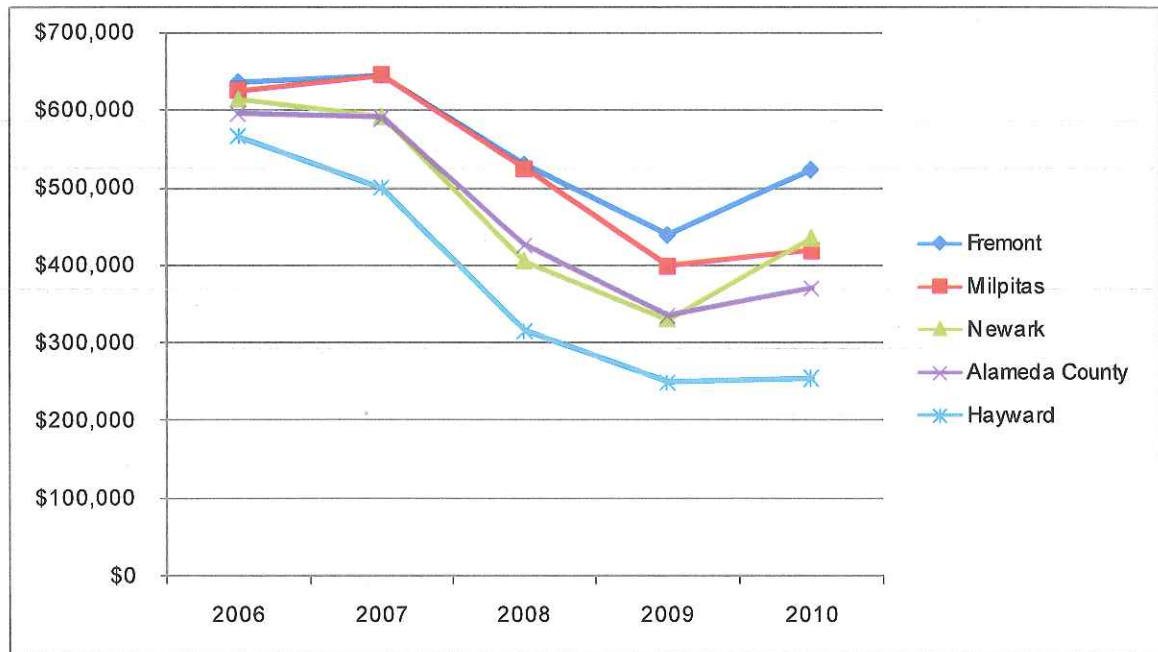
Fremont's higher median sales prices are partly explained by its inclusion of a large number of affluent hillside neighborhoods in the east. The price gradient map in **Figure 6** demonstrates the differing prices found between the hills and lower-lying neighborhoods.

Figure 5: 2010 Median Sales Prices by City/County



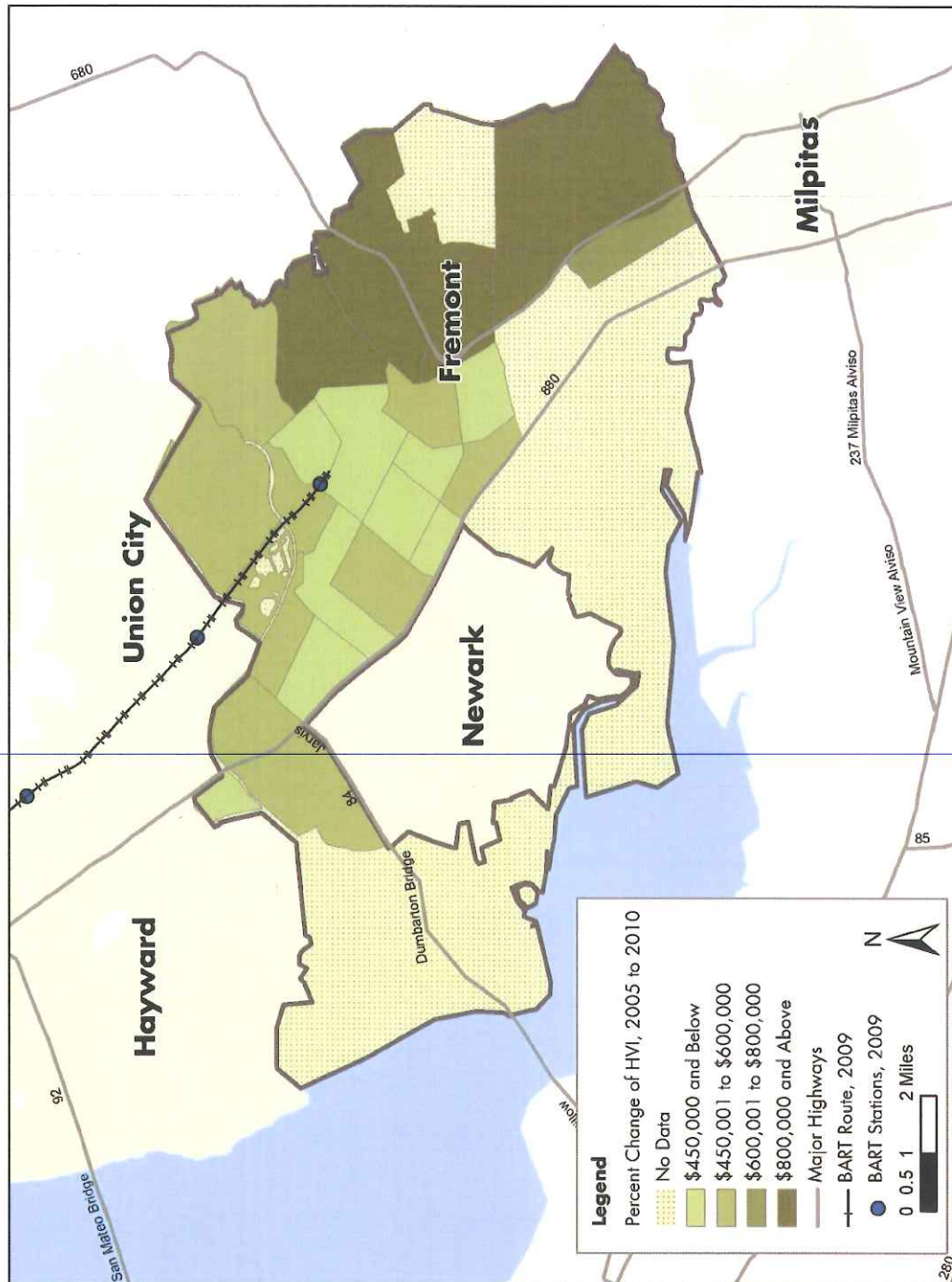
Source: Dataquick, 2010; Strategic Economics, 2010.

Figure 6: Historic Median Sales Price Performance by City/County



Source: Dataquick, 2010; Strategic Economics, 2010.

Figure 7: 2010 Median Price Gradients in the City of Fremont



Source: Zillow.com, 2010; Strategic Economics, 2010.

Within Fremont, single-family homes command a higher price per square foot than condominium developments, as shown in **Figure 8**. Local brokers stated that, despite recent increases in condominium construction, demand for condominiums is weak compared to single-family homes. In recent years, the housing downturn has led to a decline in single-family home prices, placing homes within reach of budget-conscious purchasers previously only able to afford attached housing products.

Figure 8: Median Sales Price per Square Foot in Fremont



Source: Zillow.com, 2010; Strategic Economics, 2010.

For new homes, single-family units can command higher asking prices per square foot than condominiums. Asking prices for townhouses exceed single-family homes, but the data is skewed by a single project with much higher than average asking prices. Without that project's inclusion, average townhouse asking prices per square foot are comparable to single-family homes.

Table 1: Average Asking Price per Square Foot for New Developments within Trade Area

Product Type	Price per Sq Ft
Condo	\$295
Single Family	\$314
Townhouse	\$343

Source: Hanley Wood, 2010; Strategic Economics, 2010.

Despite the downturn in the housing market, data service Hanley-Wood shows several recently-constructed ownership housing developments with units currently on the market. **Table 2** lists these housing developments. As shown, there is a greater supply of single-family housing developments than multifamily housing developments currently on the market.

Local brokers stated that Fremont contains a wide variety of neighborhoods offering a variety of prices, but is generally a mid-priced city within the larger region. That is, residents move to Fremont for its relative bargain prices within a city of quality neighborhoods, but also move out to seek less expensive options. Broker opinions agreed with the data showing that Fremont is the strongest of the immediate five-city market area.

Fremont's existing condominiums offer little value premium over owning a single-family home; older projects are large, suburban, self-contained complexes not dissimilar from older single-family home neighborhoods. These product types tend to be more affordable than single-family homes, but do not provide urban amenities such as ground floor retail, enhanced streetscapes, or gathering spaces. Trends in regional demographics and Fremont's recent construction and pricing suggest an opportunity to raise the value of more compact housing types such as condominiums, townhomes, and small-lot single-family homes, provided that the associated amenities of a "walkable" environment are included, such as pedestrian-friendly retail or access to transit. Such an environment can capture a new subset of regional housing demand by appealing to smaller and child-free households interested in a walkable, urban lifestyle that reduces automobile dependency. Inventory and price trends already show increasing development of denser products and a value premium for recently-constructed townhomes. However, locations of these developments have been scattered. As will be discussed in this chapter's demand estimate, these denser, mixed-use developments must be concentrated within a single walkable area to create critical mass to successfully capture additional demand.

Table 2: Sample of Recently Constructed Major Developments in the Fremont Trade Area

City	Type	Project Name	Developer/ Builder	Asking Price Range (Dollars)		Unit Size Range (Square Feet)		Price per Sq Ft Range (Dollars)	
Fremont	Condo	Gramercy at Park Lane West	Regis Homes	\$359,000	\$499,000	1,210	1,671	\$297	\$299
Fremont	Condo	Sonora at Montebello	KB Home	\$290,000	\$541,475	905	1,853	\$320	\$292
Fremont	Single Family	Cascades at Montebello	KB Home	\$622,892	\$673,438	1,770	2,045	\$352	\$329
Fremont	Single Family	Castilleja	Robson Homes, LLC	\$578,000	\$789,777	1,288	2,321	\$449	\$340
Fremont	Single Family	Cedarbrook	Regis Homes	\$759,900	\$815,900	1,918	2,368	\$396	\$345
Fremont	Single Family	Hummingbird	Robson Homes, LLC	\$635,000	\$709,000	1,599	2,210	\$397	\$321
Fremont	Single Family	Mission Estates	Robson Homes, LLC	\$1,409,888	\$2,047,000	3,151	4,550	\$447	\$450
Fremont	Single Family	Rosewood Cottages	Summerhill Homes	\$630,000	\$740,000	1,918	2,036	\$328	\$363
Fremont	Single Family	Rosewood Gables	Summerhill Homes	\$705,000	\$778,000	2,195	2,574	\$321	\$302
Fremont	Single Family	Villa D'Este Single Family	John Laing Homes	\$1,035,000	\$1,250,000	2,743	3,009	\$377	\$415
Fremont	Townhouse	Loredo at Montebello	KB Home	\$414,000	\$584,000	1,303	1,941	\$318	\$301
Fremont	Townhouse	Villa D'Este Condominiums	John Laing Homes	\$579,000	\$659,000	1,231	1,537	\$470	\$429
Fremont	Townhouse	Westery at Park Lane West	Regis Homes	\$539,900	\$599,900	1,463	1,746	\$369	\$344
Hayward	Condo	Crossings at Eden Shores	Standard Pacific Homes	\$409,000	\$472,158	1,526	1,867	\$268	\$253
Hayward	Single Family	Bridgeport at Eden Shores	Standard Pacific Homes	\$544,305	\$588,505	1,887	2,196	\$323	\$268
Hayward	Single Family	Carrick Village at Stonebrae	Toil Brothers	\$799,995	\$1,113,908	3,412	5,050	\$234	\$221
Hayward	Single Family	Cryer Ranch	The Mark Pringle Company, LLC	\$570,000	\$625,000	2,266	2,445	\$252	\$256
Hayward	Single Family	Eden Pointe	KB Home	\$384,561	\$549,163	1,349	2,138	\$285	\$257
Hayward	Single Family	Highland Trail	Delco Builders & Developers	\$599,900	\$674,900	2,874	3,173	\$209	\$213
Hayward	Single Family	Stirling Village at Stonebrae	Standard Pacific Homes	\$799,000	\$852,465	3,123	3,798	\$256	\$224
Hayward	Single Family	Veranda Heights at Stonebrae Country Club	Rulte Homes	\$724,800	\$750,733	2,726	3,459	\$266	\$217
Hayward	Townhouse	Garden Walk	The Olson Company	\$349,990	\$419,990	1,335	1,765	\$262	\$238
Milpitas	Condo	Luna at Terra Serena	KB Home	\$307,250	\$520,801	905	1,853	\$340	\$281
Milpitas	Condo	The Paragon	DR Horton	\$374,990	\$479,990	1,171	1,691	\$320	\$284
Milpitas	Townhouse	Town Center Villas	Shapell Homes	\$499,900	\$579,400	1,389	1,704	\$360	\$340

Note: No data available for Union City and Newark, possibly because of a lack of development activity.

Source: Hanley Wood, 2010; Strategic Economics, 2010.

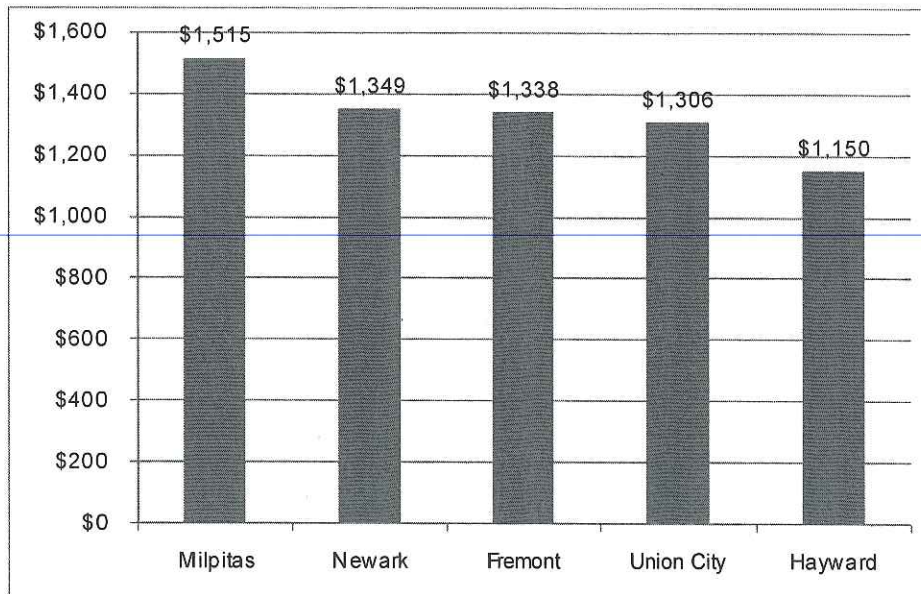
Rental Product

The rental market in Fremont is characterized as follows:

- Mid-priced within trade area.
- Suffering recent price declines, despite high occupancy rates.
- Units are concentrated near central and transit-oriented locations.
- Bargain entry to the Fremont market for budget- or maintenance-conscious families, singles, and seniors.

According to estimates from demographic data service Claritas, 35 percent of occupied Fremont housing units are renter-occupied; this low ratio is driven by the City's high share of single-family homes, which are less likely to be rentals than units in multifamily structures. As shown in **Figure 9**, Fremont's average apartment rental rate of \$1,338 places the City on par with Union City and Newark, but below Milpitas and above Hayward. Average rental rates have fallen from a high of nearly \$1,600 over the past two years; all competing cities have experienced a similar decline, but Fremont and Milpitas experienced the worst losses relative to their peaks.

Figure 9: Average Apartment Rental Rates, 2010



Source: RealFacts, 2010; Strategic Economics, 2010.

Despite the drop in rental rates, Fremont apartments have a very high occupancy rate of 96.2 percent, slightly outpacing all trade area cities except for Milpitas. Such high vacancy rates indicate a healthy rental market and high likelihood of additional development as the economy recovers.

Brokers report that apartments comprise the majority of Fremont's higher-density housing stock, and provide a low-cost entry to the city for budget-conscious families, and a low-cost, low-maintenance appeal to singles and seniors. Apartments tend to be concentrated in more central and transit-accessible areas.

Demand

Fremont Strengths

The Fremont housing market thrives based on the following strengths:

- *Local employment:* With a jobs to employed residents ratio of 0.93, Fremont slightly lags behind Alameda, San Mateo, and Santa Clara Counties (each with ratios slightly over 1.0), but is an employment center in its own right. Brokers stated local jobs as a major concern for improving housing market performance.
- *Easy access to regional employment centers:* Fremont is centrally located with the Bay Area, with easy automobile and transit access to major employment locations in the South Bay, San Francisco, and northern Alameda County.
- *High-quality schools:* Fremont has a desirable school system, drawing young couples and families.
- *Relative bargain pricing:* The median home values in Fremont and the surrounding trade area provide a relative bargain compared to other locations in the central Bay Area, such as San Mateo County and San Francisco.

Future Growth

ABAG projects that Fremont will experience growth of 14,880 households over the next 25 years, implying very strong long-term housing demand in the City. These projections imply growth of nearly 595 units annually—a number that approaches the City's recent maximum annual absorption of 600 units and far exceeds the average 320 unit absorption over the past ten years.

The Fremont housing market will need to experience a significant shift toward more compact development types if projected growth and housing demand are to be accommodated, especially since the City has only a few remaining large tracts of developable land. As previously discussed, recent development patterns indicate that developers have already begun constructing greater shares of higher-density housing types such as townhomes and condominiums, while also building historically popular single-family detached homes. However, Fremont faces the question of whether future growth will occur in a dispersed fashion that overloads roads and amenities, or if development will be focused in a more efficient manner.

In the following section, the Economics Team goes beyond simple housing demand projections and instead gauges the potential for transit-oriented development (TOD), a development pattern that can introduce efficiencies in growth patterns that allow greater densities while maintaining livability. Fremont has proven that it can easily capture demand for "business-as-usual" single-family home development. The TOD analysis instead asks whether Fremont can capture demand for households interested in transit-access and mixed-use communities in which daily needs are easily and comfortably accessed on foot.

Understanding TOD Demand

The Economics Team examined future housing demand based on the market activity influence of the existence and expansion of BART and other fixed-guideway transportation systems. Under the right conditions, development within the half-mile to one-mile radius around transit stations can host mixed-use, higher-density, walkable communities than would otherwise be possible, since access to robust transit reduces the need for automobile use and ownership. This station-area development pattern exemplifies a TOD.

Fixed-guideway transit reorganizes regional market activity by allowing for concentration of employment and/or residential uses within TODs. Demand for housing or offices that would otherwise be scattered throughout the region instead concentrates near transit stations because of the ease of inexpensive access created by transit proximity.

The commute trip is the primary organizer of market activity near TODs, since commute trips make up nearly 60 percent of all transit use¹ (this is logical since transit serves commute trips well because of their regularity and occurrence during peak rush-hour automobile traffic). Within the transit network, stations surrounded by housing serve as "origins" for commute trips, while those surrounded by jobs are "destinations."

The Economics Team assesses TOD housing demand based on three major conditions:

- *Regional demand for housing among TOD-compatible households:* Not only must housing demand exist within the region served by the transit network, but demand must include household types most likely to locate near transit. Research by the Center for Transit-Oriented Development shows that younger and older households without children generate the majority of demand for TOD.
- *Connectivity of system to destinations:* Station area housing demand is partly determined by whether the transit system provides a frequent, comfortable, and speedy linkage to concentrated employment centers that match resident skills and occupations. The added benefits of transit are undercut if the system fails to link to sufficient job concentrations near stations, with office-based jobs featuring higher employment densities than most industrial jobs. Further, stations closer to job concentrations and/or jobs compatible with the skills of TOD residents will attract greater housing demand than more distant stations of those featuring mismatched resident skill levels.
- *"Place-based" compatibility:* Regardless of the above two conditions, regulations and improvements within the station area must support TOD. The street grid must be well-connected and at a pedestrian scale to encourage walking and bicycling, automobile traffic must not be intimidating to other street users, sufficient density must exist to increase station use and generate a vibrant street environment, and basic goods and services must be located near housing to further reduce automobile need and encourage pedestrian traffic. Cities can encourage such development through planning regulations, street/streetscape design, and investments in adequate open space and utilities connections.

¹ 2007 American Public Transit Association *Factbook*

Fremont in the TOD Demand Context

The Economics Team projected Fremont's TOD demand share by first examining the City under the three conditions for residential TOD listed above:

- *Regional demand for housing among TOD-compatible households:* In previous work for the Metropolitan Transportation Commission, Strategic Economics has found significant future regional growth among households likely to reside within a TOD. Historically the Fremont market has focused on a different, family-oriented type of household. Therefore, Fremont's ability to locally capture this demand depends on how well the next two conditions are met.
- *Connectivity of system to destinations:* While BART will serve San Jose and does serve many of the other cities in which Fremont residents work, demand driven by these commute patterns will be blunted by the dispersed nature of these employment centers. To determine Fremont's capture of future regional TOD household growth, the Economics Team analyzed current commute patterns of Fremont residents and how well the future expanded fixed-guideway transit system (especially BART) will connect to concentrated employment centers. As shown in **Table 3**, below, 21.5 percent of Fremont residents work in the City and another 10 percent in San Jose. The rest of the employment locations are highly dispersed, with no other city hosting more than 5 percent of the Fremont resident workforce.
- *"Place-based" compatibility:* Fremont's commitment to creating TODs within new BART station areas will ultimately determine whether they capture housing demand, since the City will be responsible for determining whether to implement regulations and infrastructure investments required to attract development.

Based on qualitative factors, Fremont is likely to capture a relatively small share of robust regional TOD housing demand by 2035. Although BART expansion will create a draw to the Warm Springs area, Fremont employment tends to be widely dispersed outside the City. BART expansions are not anticipated to directly connect high-density employment destinations that would more effectively bolster the Fremont housing market. Transit will still provide a limited boost to Fremont's ability to capture a greater share of TOD household types, but the increment is limited such that it may be necessary to heavily concentrate such housing—and public placemaking efforts—in one or two areas.

Table 3: Top Ten Cities in which Fremont Residents Work

City	Jobs	Share
Fremont	21,091	21.5%
San Jose	9,746	10.0%
San Francisco	4,551	4.6%
Santa Clara	4,387	4.5%
Hayward	4,357	4.5%
Sunnyvale	3,756	3.8%
Palo Alto	3,688	3.8%
Oakland	2,856	2.9%
Milpitas	2,599	2.7%
Newark	2,525	2.6%
All Other Locations	38,352	39.2%

Source: United States Census Longitudinal Employer-Household Dynamics, 2008; Strategic Economics, 2010.

Figure 10: Future BART Alignment and Current Employment Locations of Fremont Residents Near the Alignment, by ZIP Code

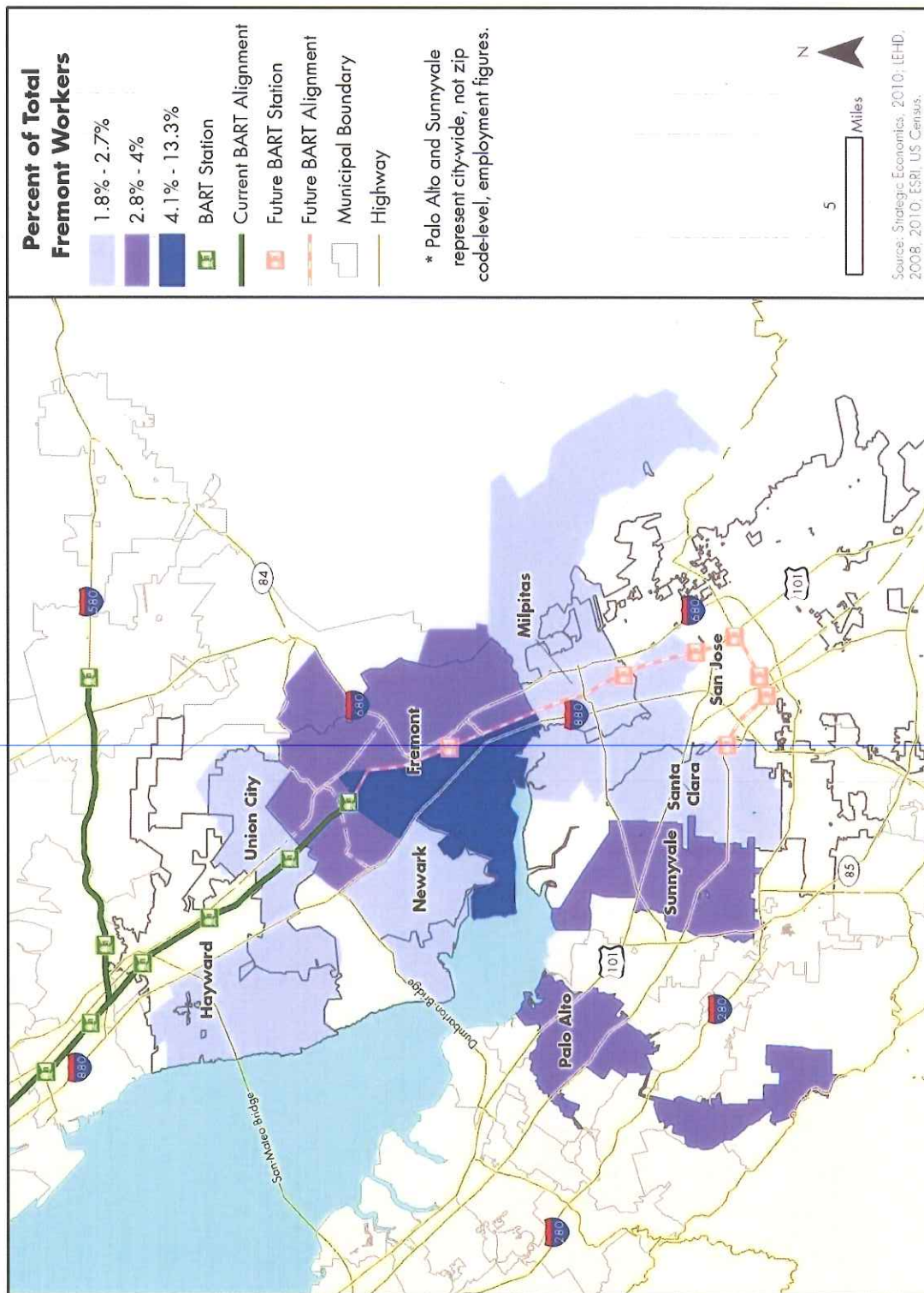
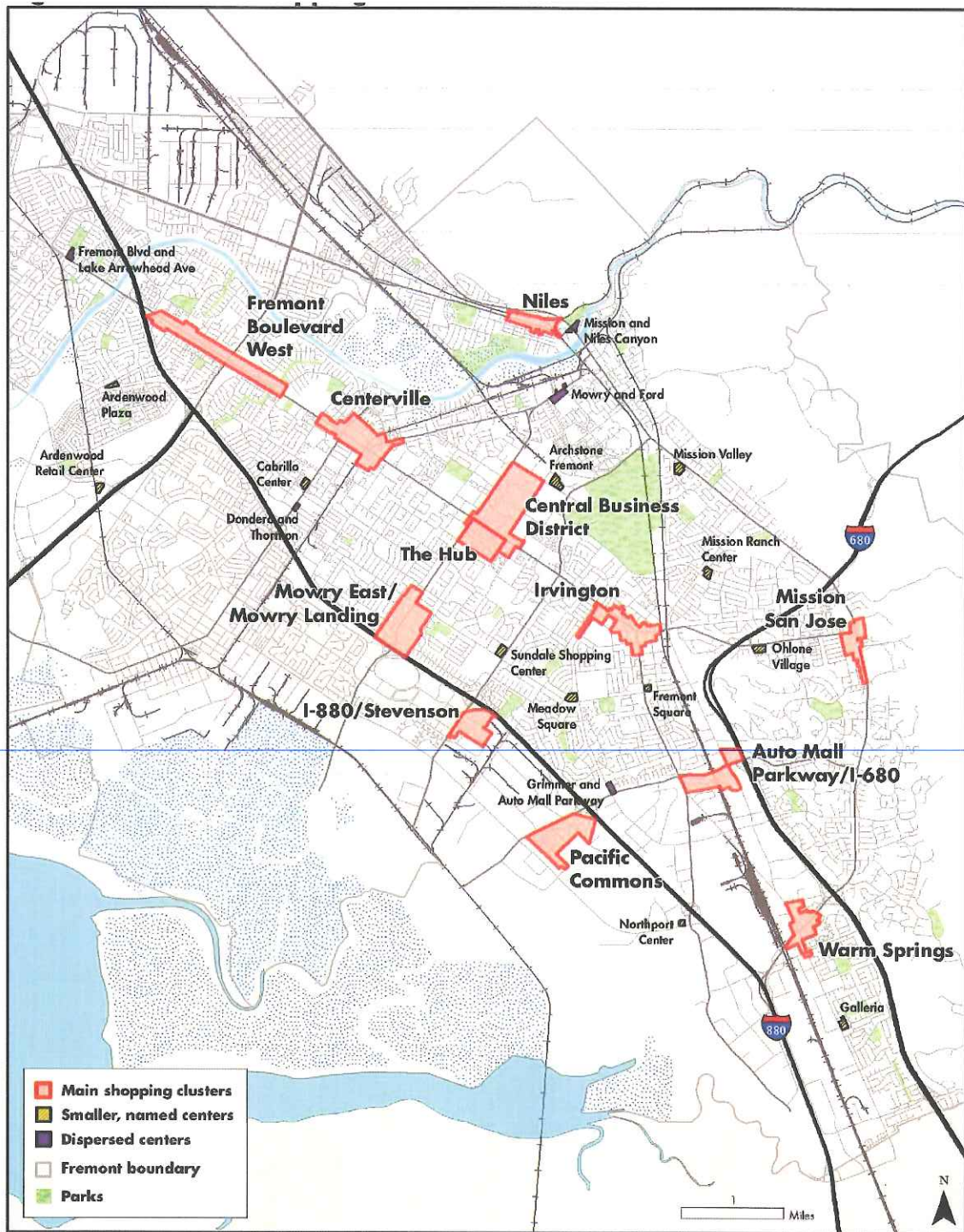


Figure 11: Existing Supply



- the secondary trade area which includes Fremont, Union City, Newark, and Milpitas—regional retail centers with comparison goods like big box stores and malls; and
- the tertiary trade area which extends to Pleasanton, Walnut Creek San Jose, and Palo Alto—comparison specialty or luxury goods, lifestyle centers.

Existing Competitive Supply

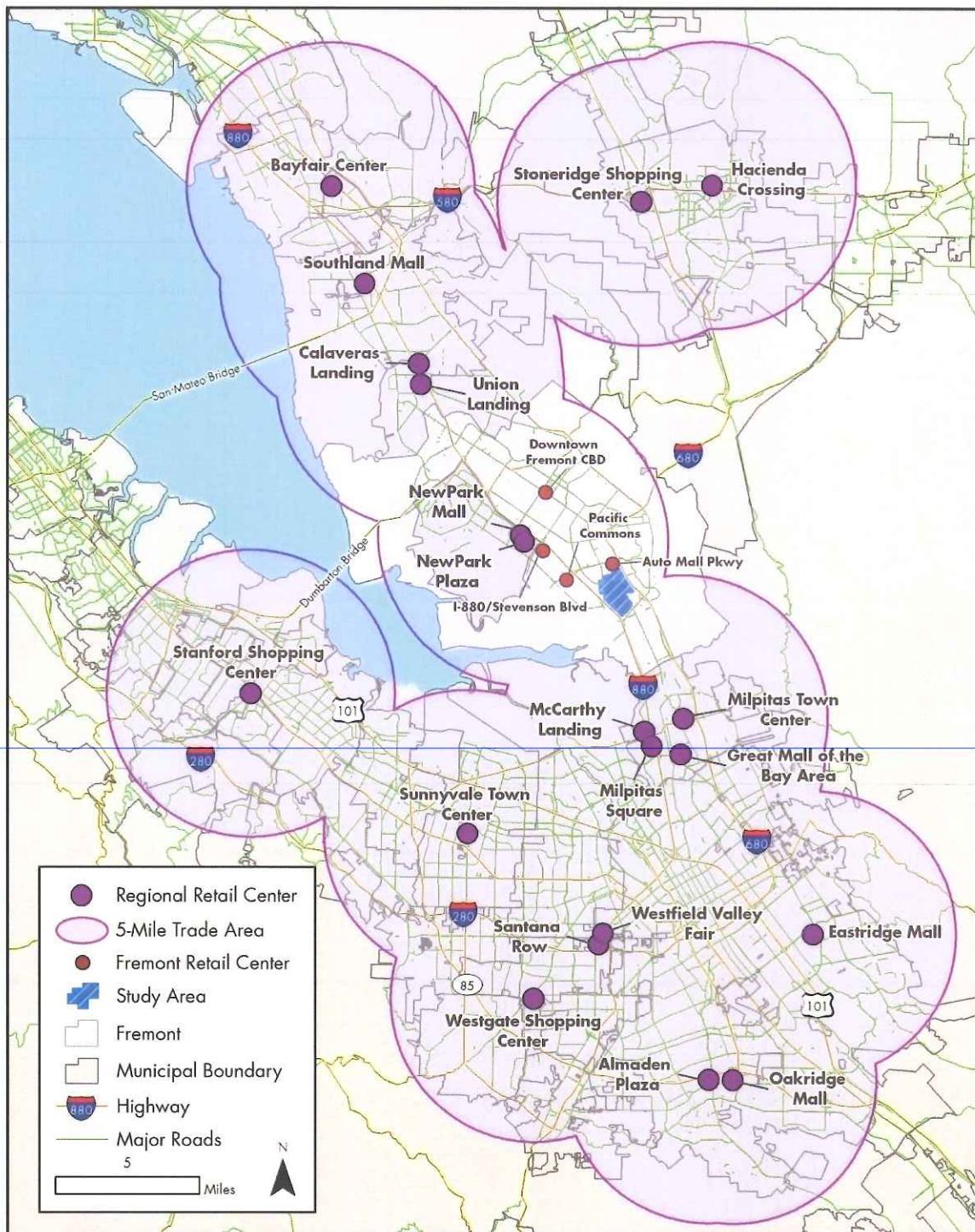
Fremont's secondary trade area extends from Union City to Milpitas. At present, the primary and secondary trade areas comprise almost 500,000 residents. Within this region, the City of Fremont, as the primary trade area, has approximately 214,000 residents.

The cities in the secondary trade area have several regional-serving power centers (McCarthy Ranch, +/-400,000 square feet, and Union Landing, +/-450,000 square feet) that are anchored by big box, value-oriented retailers such as Wal-Mart, Petsmart, Ross, and Borders Books. Although the tenant mix is slightly different, these centers are comparable in size and merchandise mix to Pacific Commons. All of these centers are oriented towards I-880 and draw from a highly mobile trade area extending from the Hayward border to the northern sections of San Jose that are not well served by any other retail centers.

The tertiary trade area for regional shopping centers includes cities that are farther away but which nevertheless attract Fremont residents. These centers include Bay Street in Emeryville, Broadway Plaza in Walnut Creek, Stoneridge Shopping Center in Pleasanton, Stanford Shopping Center in Palo Alto, and Valley Fair/Santana Row in San Jose, among others. They host a mix of value and upscale tenants, such as Best Buy, Banana Republic, Gap, Ann Taylor, Bloomingdale's, Macy's, Neiman Marcus, and Nordstrom.

The largest void in the existing supply of retail space anywhere within the primary and secondary trade areas are places that target higher income shoppers and follow the recent consumer trend of lifestyle and/or pedestrian-oriented retail centers. The existing supply does not offer an alternative to standard retail product types, nor does it provide the opportunity for visitors to stroll in a pedestrian friendly and entertainment-oriented environment. Fremont lacks the selection and upscale quality of retail centers that are available regionally in the East and South Bay communities. Until the development of Pacific Commons, Fremont had been lacking in comparison merchandise.

Figure 12: Competitive Supply



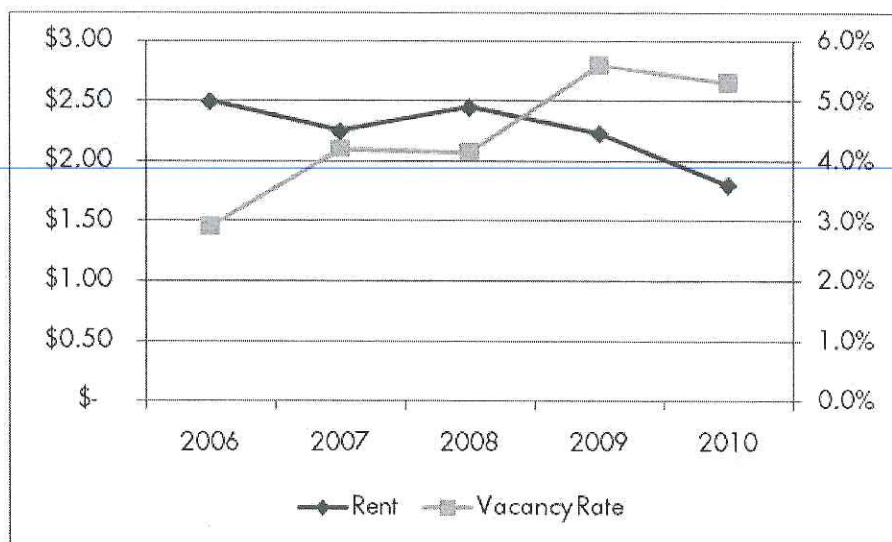
Market Performance

A recent City report providing an update of key retail indicators shows that retail performance has suffered since 2006, but some indicators remain relatively positive. Retail vacancy rates have risen from approximately 2.9 percent in 2008 to 5.3 percent, but are still very low in general. Average rents have fallen from approximately \$2.50 to \$1.80 per square foot. The 2010 report also shows that the proportion of 'shadow space' or space that is leased but not occupied has increased since 2006.

The 2006 retail study concluded that retail vacancy rates do not reflect that many of the retail clusters have a portion of space occupied being by non-retail uses. These non-retail uses include businesses such as medical/dental offices, mortgage/real estate offices, recreational facilities, etc. In some centers, the number of non-retail uses is actually very high. This is often an indication of older and obsolete retail space or locations that are not ideal for any retail and do not meet current retail standards.

A full update of retail sales was not completed for this report, but the 2010 retail update did track the change in retail sales tax revenue to the City. Major declines were seen in almost all major shopping clusters with the exception of the City Center which saw a modest increase of 3 percent. All other shopping clusters showed a decline in sales tax revenue of between 3 and 39 percent and most saw double digit declines.

Figure 13: Rental Rates and Vacancy Rates



Source: Boyd and Associates, 2010; CoStar Research, 2010.

Planned and Proposed Supply

The recent economic downturn has caused construction on retail projects to come to a halt and many projects that have received their entitlements are on hold. In contrast, in 2008, there was almost 2.5 million square feet of planned or proposed retail, 783,000 square feet of which was under construction. There are signs that the recession is starting to wane enough to pique the interests of retail developers. Construction on the last phase of the Pacific Commons Center is

scheduled to begin in 2011. The new Pacific Commons construction would add approximately 321,000 square feet of retail, including a Target and a Century Theater, for a total retail area of about 1.2 million square feet. Additionally, in late 2009, the 487,000 square-foot Creekside Landing shopping center was entitled in the Baylands subarea.

Demand

Market demand for retail goods comes from two sources. The first is from unmet demand within the market or trade area where the supply of stores is inadequate to meet demand. The second source is from a mismatch between supply and consumer preferences. This condition often occurs when retailing trends have shifted but retailers in any given market area have not necessarily kept up with these trends. This section discusses demand generated by residents based on their consumer preferences and then concludes with an estimate of long-term demand based on overall population growth.

Demographic Characteristics

Fremont has strong demographics characteristics from a retail perspective. At \$98,587, the median household income is well above that of the County at \$71,965 and the State at \$62,401. Fremont residents are also well-educated. Forty-nine percent of Fremont's population has a Bachelor's degree or higher, compared to 39 percent for Alameda County and 29 percent for the State of California.

While basic demographics present a general picture of Fremont's population and their general tendencies towards retail spending, these data provide virtually no information about actual spending habits and the types of goods the City's residents are actually buying. The 2008 retail study used data from Claritas, a San Diego marketing and demographics firm that has been tracking household behavior, including lifestyle and buying habits, for 30 years. This "psychographic" data, in addition to the basic demographics such as age and income, can help to understand consumer expenditures on retail and entertainment. The 2008 retail study concluded that almost 60 percent of households fall into psychographic categories that could be considered to have "urban" shopping preferences. Fremont's psychographic profile is significantly different from surrounding areas and is similar to more affluent communities such as San Jose, Palo Alto and Walnut Creek. This has important implications for the demand for high quality urban shopping experiences and the ability to support such retailers.

It appears that Fremont residents are shopping in Fremont for their daily needs but go to Walnut Creek, San Jose and Palo Alto to shop for higher end merchandise. Because of this mismatch between resident shopping preferences and available supply, there is opportunity to create shopping districts that provide all of the features associated with "walkable urbanism" including more boutique shops, outdoor dining and cafes, entertainment, and dense housing. This is in keeping with current efforts in the City Center (Midtown Plan) and Centerville. However, creating an urban shopping experience can be challenging and many of the most successful examples were able to start with an historic downtown which was revitalized and expanded. Since those opportunities in Fremont are limited, efforts to build this kind of retail should be focused in existing retail clusters to take advantage of existing synergies. The following section discusses the magnitude of retail demand in the long term.

Long-Term Demand

In order to assess the long-term demand for retail, the Economics Team used population projections from ABAG to calculate the incremental increase in population between 2010 and 2035. ABAG projects a population increase of 116,000 between 2010 and 2035, 42,000 of which are projected to be Fremont residents. The demand generated by these residents could be captured within Fremont if new retail provides a good match with the consumer preferences mentioned in the above section. Once the incremental population was calculated, sales tax data from the State Board of Equalization was used to calculate per capita spending in the primary trade area. Multiplying population time per capita spending provides an estimate of total future demand in the primary trade area. Fremont can only be expected to capture a portion of this demand. Low and high capture rates were developed using a combination of Fremont's existing capture of sales and estimates of future capture rates based on market demand (see **Table 5**). Multiplying these capture rates by total demand results in an estimate of retail demand in Fremont between 2010 and 2035.

Table 5: Assumed Fremont Capture Rates of Future Retail Growth within Trade Area

Retail Category	High Capture Rate	Low Capture Rate
	2010-2035	2010-2035
Apparel stores	14.3%	10.0%
General merchandise stores	54.0%	45.0%
Food stores	51.3%	45.0%
Eating and drinking places	38.2%	30.0%
Home furnishing and appliances	53.0%	40.0%
Other retail stores	42.9%	35.0%

Source: Strategic Economics, 2010.

Table 6: Potential for New Retail in the Fremont Trade Area (in net sq. ft. of leasable space)

Retail Category	High Capture Rate	Low Capture Rate
	2010-2035	2010-2035
Apparel stores	177,300	123,800
General merchandise stores	1,010,300	841,700
Food stores	707,400	621,000
Eating and drinking places	712,100	559,500
Home furnishing and appliances	259,200	195,800
Other retail stores	1,953,600	1,592,400
TOTAL	4,819,900	3,934,200

Source: State Board of Equalization, 2010; Association of Bay Area Governments, 2010; Strategic Economics, 2010.

As mentioned in the retail supply section, approximately 321,000 square feet of retail is already planned for Pacific Commons and 487,000 is entitled for Creekside Landing, while the draft Midtown and Centerville area plans call for some new retail to be constructed and some shifting of existing retail. In addition, urban retail on a smaller scale is also called for in plans for Irvington and Niles. However, not all of this demand will be fulfilled by the construction of new retail stores or centers. Some of this demand will be fulfilled by revitalizing older, underperforming retail, resulting in higher sales. Fremont, with its high median incomes and resident preferences for urban style retail, has the potential to capture a greater portion of high-end retail compared to other cities in the trade area.

Conclusions

The retail analysis shows that there is significant long-term demand for high-quality retail in the Fremont Trade Area and the primary focus should be on providing retail in an urban format. Some of the demand will be absorbed by improving existing centers. However, the study also showed that while there is demand for additional retail, there is a significant amount of dispersed retail. This points to the need to concentrate or “prune” the existing retail supply in order to create more synergistic retail centers. In addition, this retail concentrating would serve to strengthen key retail nodes that focus on good locations and a strong tenant mix, and create a critical mass. In addition, clustering retail businesses could help with pedestrian connectivity and provide for more sustainable development patterns in the future.

This dispersion of retail throughout the City also serves to dilute from those areas that are considered commercial cores, especially in the historic districts. For example, downtown Centerville continues to compete with the Brookvale Shopping Center for neighborhood-serving retail thereby limiting its ability to create a strong retail core. Anecdotal evidence suggests that the City of Berkeley has successfully used this strategy along San Pablo Avenue. Over the past

eight years, the City has allowed a number of residential projects along San Pablo Avenue on sites that were previously zoned for commercial uses. The combination of additional residents and retail pruning has revitalized the adjacent neighborhood commercial districts.

There are currently two area plans² whose goal is to attract a significant amount of urban style retail. However, because these plans are in areas where there is no existing historic 'town center' to use as a base for this type of retail, efforts to attract retail will be more difficult than it might be in other cities. Attempting to develop additional lifestyle or urban shopping districts will further dilute efforts in Midtown and Centerville.

Given current area plans, efforts to date in existing neighborhoods, and site considerations, retail development in the study area should be limited to community-serving retail in the near to mid-term to prevent competition with existing retail centers. In the long term, once area plans in Midtown and Centerville have gained momentum, regional-serving retail can be considered in the study area.

² City Center (Midtown) and Centerville.

IV. HOTEL

Existing Supply

For this analysis, the Economics Team evaluated the market for hotels in the Fremont Trade Area.³ There are a total of 71 hotels with 8,702 hotel rooms in the Fremont Trade Area (see **Table 7**). The hotels were divided into two market segments: Midscale/Economy, mostly serving budget-conscious travelers, and Upscale/Luxury Hotels, primarily serving the business/conference market. The majority of the hotels in the trade area are in the Midscale/Economy segment, no doubt taking advantage of visibility and access along the highway corridors. **Figure 13** shows the Midscale/Economy Hotels in the trade area. The Upscale/Luxury segment generally contains larger hotels, so while the Midscale/Economy segment comprises 75 percent of hotel properties in the trade area, it comprises 60 percent of total hotel rooms (see **Table 8**).

Table 7: Number of Hotels and Hotel Rooms

	Hotel Properties			Hotel Rooms		
	Market Area	Fremont	Fremont Share	Market Area	Fremont	Fremont Share
Midscale/Economy Hotels	53	16	30%	5,176	1,727	33%
Upscale/Luxury Hotels	18	4	22%	3,526	734	21%
Total Hotels/Total Rooms	71	20	28%	8,702	2,461	28%

Source: Smith Travel Research, 2010; Strategic Economics, 2010.

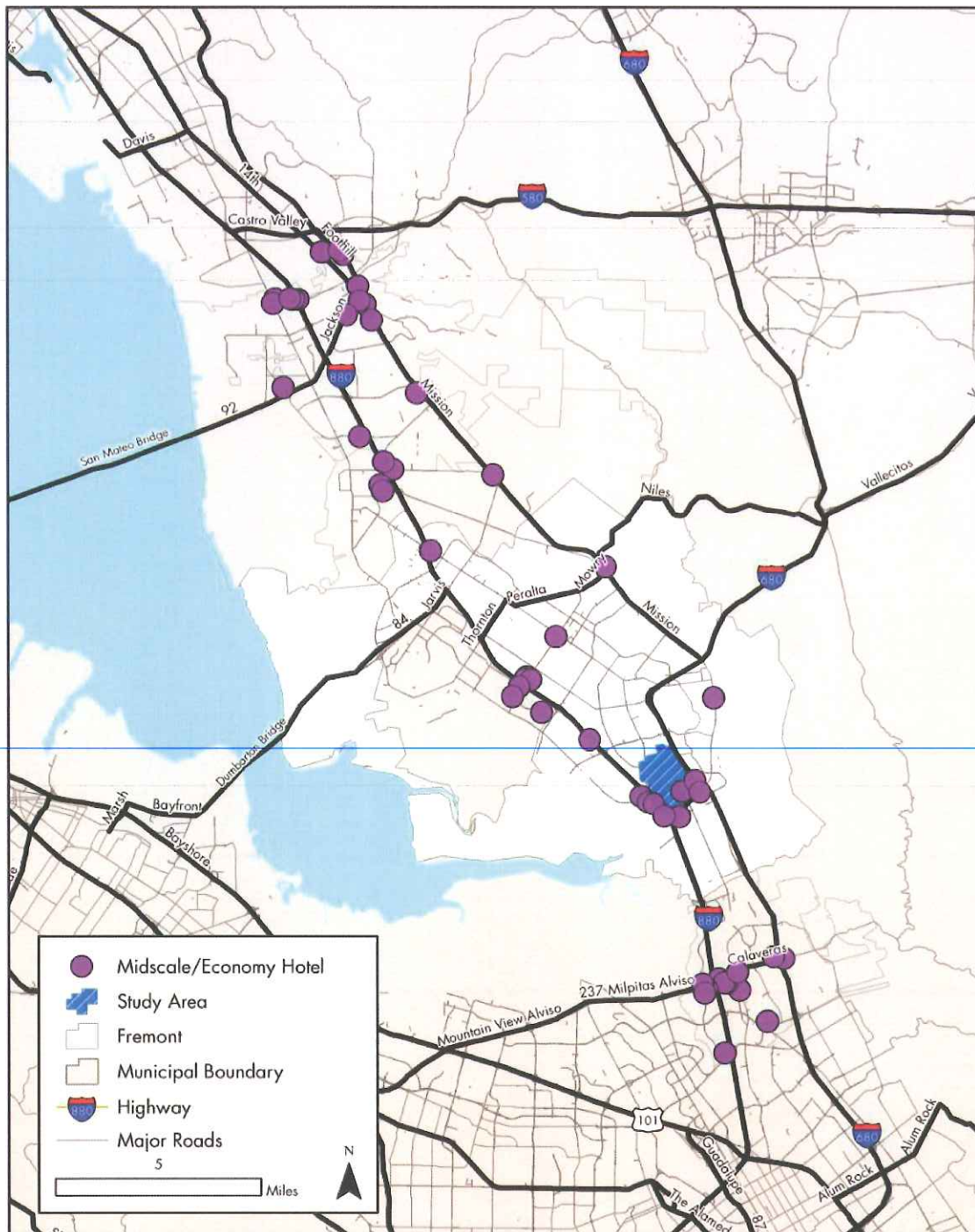
Table 8: Average Property Size

	Average Property Size	
	Market Area	Fremont
Midscale/Economy Hotels	98	108
Upscale/Luxury Hotels	196	184
Total Rooms	147	146

Source: Smith Travel Research, 2010; Strategic Economics, 2010.

³ The trade area for hotels includes Fremont, Hayward, Milpitas, Newark and Union City.

Figure 14: Midscale/Economy Hotels in the Trade Area

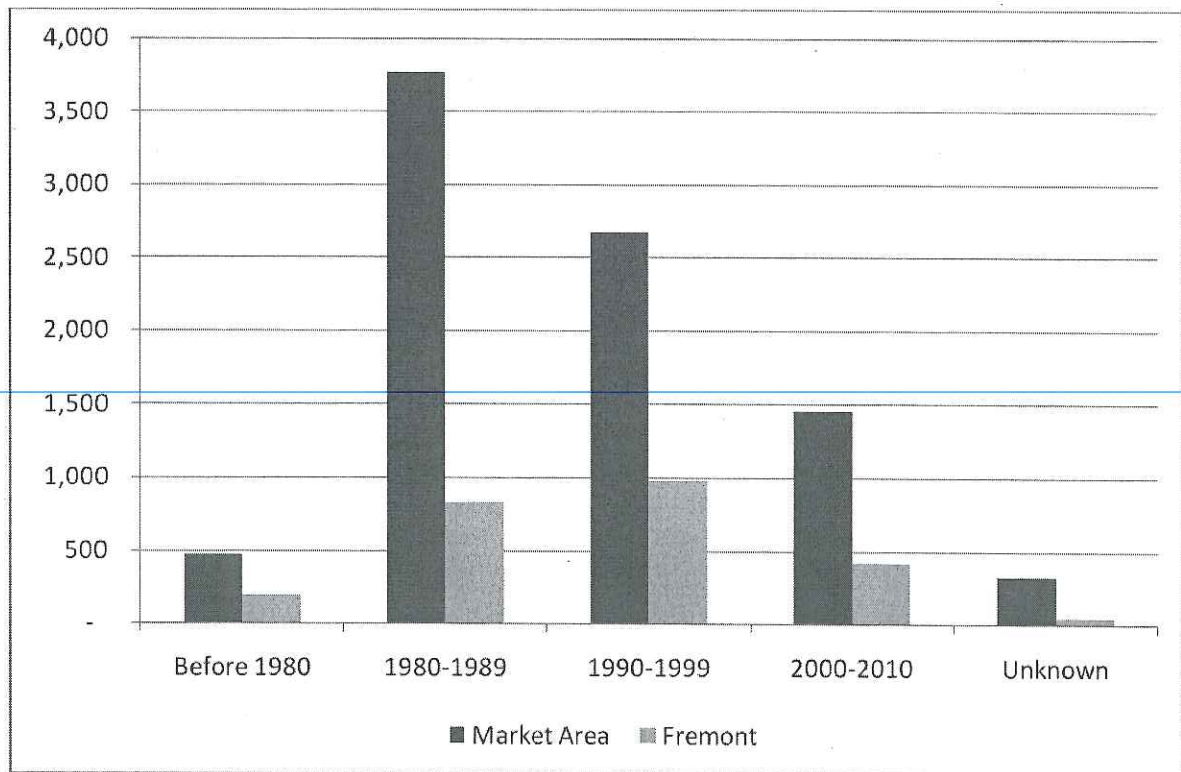


Source: Strategic Economics, 2010; ESRI, US Census.

Almost 30 percent of all hotel rooms in the market area located in Fremont. Fremont contains 30 percent of Midscale/Economy and 22 percent of Upscale/Luxury hotel properties and about the same breakdown of hotel rooms by segment. A large percentage of the Upscale/Luxury hotels are located in Newark and Milpitas. Many of the hotels in Milpitas are branded as San Jose hotels suggesting that Milpitas is better able to serve the Silicon Valley business market than the other cities in the trade area.

Data on hotel construction from Smith Travel Research shows that over the past 40 years, the number of hotel rooms built varies significantly from decade to decade (see **Figure 15**). There was a boom in hotel construction in the 1980s and 1990s, when the region was rapidly expanding, followed by a significant slowdown in the early 2000s. Since 2002, there have been no new hotels built in the trade area. Looking at long-term trends over the past 30 years, the trade area has absorbed approximately 263 rooms per year, while Fremont has absorbed 74 rooms per year.

Figure 15: Number of Hotel Rooms Built by Decade



Source: Smith Travel Research, 2010; Strategic Economics, 2010.

Market Performance

As mentioned above, the supply of available rooms has been basically static for the past six years (see **Tables 9** and **10**). There was a slight increase of 16 additional rooms in the Luxury/Upscale segment. The Average Daily Rate remained modest even during peak of the economy at \$70.65 for Midrange and \$112.68 for Luxury hotels. Occupancy rates were similar among both Midrange and Luxury hotels. During the same period occupancy rates for Midrange hotels moved from a low of 54 percent in 2004 to a peak of 68.7 percent in 2007 and dropped down to 57 percent at the end of 2009. Occupancy rates for Luxury hotels moved from 55.6 percent in 2004 to a peak of 68.5 in 2007 and dropped to 55.4 percent at the end of 2009. These occupancy rates are considered at or below the break-even point. The year-to-date occupancy rates for 2010 are up from last year in both segments, suggesting that occupancy rates could be recovering. Room rates followed a similar trend to occupancy rates, peaking in 2008 and falling during the recent recession.

Demand and Conclusions

Several parcels in the study area have strong regional access and good highway visibility, ideal for mid-scale and economy hotels. This segment also comprises 60 percent of hotel rooms in the trade area. The data also indicates that Fremont has strength in this market segment. However, given that no new hotels were built even during the last market peak, and occupancy rates remained relatively modest, suggests limited demand for hotels in the short term. Until occupancy rates and average daily rates rise, it is unlikely that significant hotel room additions will occur in the trade area. In the medium to long term, assuming long-term trends continue, there could be demand for an additional 2,200 rooms over the next 30 years. Given that this trade area is attracting primarily budget-conscious business travelers, opportunities for new hotel construction will hinge on a strong regional economic recovery and job creation.

Table 9: Midscale Economy Hotel Trends

	2004	2005	2006	2007	2008	2009	2010*
Available Room Nights <i>Change from Previous Year</i>	1,889,240	1,889,240 0%	1,889,240 0%	1,889,240 0%	1,889,240 0%	1,889,240 0%	1,889,240
Occupied Room Nights <i>Change from Previous Year</i>	1,019,705	1,140,966 12%	1,211,582 6%	1,297,499 7%	1,241,725 -4%	1,076,598 -13%	829,664
Occupancy	54.0%	60.4%	64.1%	68.7%	65.7%	57.0%	66.0%
Average Daily Rate (ADR)	\$57.77	\$57.89	\$64.03	\$69.33	\$70.65	\$59.89	\$58.19

Source: Smith Travel Research

*Figures for 2010 are YTD

Table 10: Upscale Hotel Trends

	2004	2005	2006	2007	2008	2009	2010*
Available Room Nights <i>Change from Previous Year</i>	1,281,150	1,281,150 0%	1,286,990 0%	1,286,990 0%	1,286,990 0%	1,286,990 0%	856,818
Occupied Room Nights <i>Change from Previous Year</i>	725,588	764,885 5%	871,048 14%	881,649 1%	858,269 -3%	713,246 -17%	469,807
Occupancy	56.6%	59.7%	67.7%	68.5%	66.7%	55.4%	65.1%
Average Daily Rate (ADR)	\$90.33	\$94.01	\$99.76	\$108.41	\$112.68	\$96.69	\$95.57

Source: Smith Travel Research

*Figures for 2010 are YTD

V. OFFICE AND INDUSTRIAL USES

This chapter describes the baseline market conditions facing office and industrial uses in the City of Fremont (City) and identifies potential future growth industries and citywide space and land needs to accommodate this growth. It also considers Warm Springs in the context of the potential overall demand and competitive locations and provides initial conclusions concerning the opportunities and constraints for office and industrial uses within the South Fremont/Warm Springs area. For the purposes of this analysis, industrial uses are defined as including R&D flex space, manufacturing space, and warehouse and distribution space. As well as being integrated into a number of the industrial uses, stand-alone office space is also evaluated separately. Subsequent stages of the overall South Fremont/Warm Spring Study effort, including the White Paper and Expert Panel, will add to and potentially refine the initial market indication described in this chapter.

Economic Context

This section provides an overview of the economic context of the City of Fremont. It includes a description of the regional economy, including the I-80/880 Corridor, Silicon Valley, and the City of Fremont. It also highlights some of the City's core assets heading into the future, including the driving industries most likely to generate future industrial job growth in the City.

Regional Economy

The San Francisco Bay Area economy provides 3.5 million jobs with major job centers located in Silicon Valley, the City of San Francisco, the I-80/880 Corridor, the Tri-Valley, and areas in the North Bay. Economic growth and technological change have driven the demand for workplace development, including office, warehouse, manufacturing, and R&D Flex space in these job centers.

Interstate 80/880 Corridor

Fremont's local economy is tied to the economic trends along Silicon Valley and the I-80/880 Corridor. The I-80/880 Corridor is one of the largest employment centers in the East Bay, accounting for approximately 528,000 jobs, or 15 percent of the Bay Area total (see **Table 11**). Running north-south along the western edge of the East Bay, the I-80/880 Corridor traverses the western edge of Contra Costa County and Alameda County. This report focuses on the central and southern portions of the I-80/880 Corridor and defines the I-80/880 Corridor for this report as including the cities of Berkeley, Emeryville, Oakland, San Leandro, Hayward, Union City, Newark, and Fremont.

Table 11: Bay Area Employment Comparison 2010: Number of Jobs

Industry	I-80/880 Corridor	Silicon Valley	Other Bay Area	Bay Area
Manuf, Wholesale & Trans.	143,240	346,860	227,080	717,180
Retail	51,820	117,460	178,120	347,400
Financial & Prof. Service	90,340	256,350	420,170	766,860
Health, Ed. & Rec. Service	172,980	362,940	584,780	1,120,700
Other (1)	<u>70,310</u>	<u>162,580</u>	<u>266,290</u>	<u>499,180</u>
Total (2)	528,690	1,246,190	1,676,440	3,451,320
% of Total	15%	36%	49%	100%

(1) Includes Information, Construction, and Public Administration.

(2) Excludes Agriculture and Natural Resources Categories.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

About 27 percent of the employment along the I-80/880 Corridor, or 143,000 jobs, falls under the manufacturing, wholesale, and transportation category, the job category containing the most industrial jobs. This is similar to the proportion in Silicon Valley, but significantly higher than the average of 20.8 percent in the Bay Area overall. The level of industrial employment along the I-80/880 Corridor is tied to the history of the area and the associated advantages of proximity to the Port of Oakland and other regional transportation infrastructure. The Corridor accounts for 20 percent of the total manufacturing, wholesale, and transportation jobs in the Bay Area (see **Table 12**). Employment composition along the I-80/880 Corridor in each City is summarized in **Tables 13, 14, and 15**.

Silicon Valley

Silicon Valley is located in the southern part of the San Francisco Bay Area with its core represented by Santa Clara County and San Mateo County, the definition used in this analysis. However, the strong economic connections and expanding reach have, more recently, resulted in more expansive definitions, including the southern Alameda County cities of Fremont, Newark, and Union City, as well as the Santa Cruz County community of Scotts Valley.

The defining characteristics of Silicon Valley are its interrelated industries and economic activities that have created a region recognized worldwide as a leader in technological innovation and progressive corporate culture. Silicon Valley is home to the headquarters of numerous internationally prominent information technology companies such as IBM, Cisco, Apple, Hewlett Packard, Google, Facebook, and Intel and Fremont-based companies like Lam Research, and Logitech. In addition, the region is home to many more small and/or start-up firms that are equally responsible for the region's reputation. Silicon Valley includes 1.25 million jobs, 36 percent of the Bay Area total (see **Table 11**). Similar to the I-80/880 Corridor, Silicon Valley has a high concentration of manufacturing, wholesale, and transportation jobs, especially in Santa Clara County.

Table 12: Bay Area Employment Comparison 2010: Percentage of Total Jobs

Industry	I-80/880 Corridor	Silicon Valley	Other Bay Area	Bay Area
Manuf, Wholesale & Trans.	20.0%	48.4%	31.7%	100.0%
Retail	14.9%	33.8%	51.3%	100.0%
Financial & Prof. Service	11.8%	33.4%	54.8%	100.0%
Health, Ed. & Rec. Service	15.4%	32.4%	52.2%	100.0%
Other (1)	<u>14.1%</u>	<u>32.6%</u>	<u>53.3%</u>	<u>100.0%</u>
Total (2)	15.3%	36.1%	48.6%	100.0%

(1) Includes Information, Construction, and Public Administration.

(2) Excludes Agriculture and Natural Resources Categories.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

The history of economic growth in Silicon Valley is closely tied to Stanford University and other Bay Area educational institutions as well as the linkages between academic and federal research and industry. Silicon Valley has been at the forefront of a number of the most significant innovation waves since 1950, including the semiconductor industry, the personal computer industry, the internet industry, and the biotech industry. It is also at the forefront of the emerging green/clean tech industry and the ongoing convergence of the biotech, nanotech, and infotech fields.

Fremont

The City of Fremont is located in the southern portion of the I-80/880 Corridor adjacent to the smaller cities of Newark and Union City as well as the City of Milpitas in Santa Clara County, and across the Dumbarton Bridge from the City of Palo Alto. Historically, its economic growth and contractions were primarily related to the economic performance of I-80/880's industrial base. However, much of the new economic growth in the City since 1990 has been tied to the economic performance of Silicon Valley and has related to established and emerging technology sectors.

Table 13

**I-80/880 Corridor Employment Comparison 2010: Number of Jobs
South Fremont/Warm Springs Area Study; EPS#20050**

Industry	Oakland	Emeryville	San Leandro	Berkeley	Hayward	Union City	Newark	Fremont	I-80/880 Corridor Total
Manuf, Wholesale & Trans.	40,490	3,690	13,730	6,270	25,270	7,740	7,270	38,780	143,240
Retail	11,960	2,720	6,690	6,210	8,570	2,150	4,310	9,210	51,820
Financial & Prof. Service	35,960	3,670	6,680	14,260	9,030	2,180	2,270	16,290	90,340
Health, Ed. & Rec. Service	65,650	2,690	10,180	40,880	20,380	5,860	4,670	22,670	172,980
Other (1)	<u>34,250</u>	<u>3,630</u>	<u>3,540</u>	<u>8,510</u>	<u>8,940</u>	<u>2,240</u>	<u>1,780</u>	<u>7,420</u>	<u>70,310</u>
Total (2)	188,310	16,400	40,820	76,130	72,190	20,170	20,300	94,370	528,690
% of Total	35.6%	3.1%	7.7%	14.4%	13.7%	3.8%	3.8%	17.8%	100%

(1) Includes Information, Construction, and Public Administration.

(2) Excludes Agriculture and Natural Resources Categories.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

Table 14
I-80/880 Corridor Employment Comparison 2010: Job Distribution by City
South Fremont/Warm Springs Area Study; EPS#20050

Industry	Oakland	Emeryville	San Leandro	Berkeley	Hayward	Union City	Newark	Fremont	I-80/880 Corridor Total
Manuf, Wholesale & Trans.	28.3%	2.6%	9.6%	4.4%	17.6%	5.4%	5.1%	27.1%	100.0%
Retail	23.1%	5.2%	12.9%	12.0%	16.5%	4.1%	8.3%	17.8%	100.0%
Financial & Prof. Service	39.8%	4.1%	7.4%	15.8%	10.0%	2.4%	2.5%	18.0%	100.0%
Health, Ed. & Rec. Service	38.0%	1.6%	5.9%	23.6%	11.8%	3.4%	2.7%	13.1%	100.0%
Other (1)	<u>48.7%</u>	<u>5.2%</u>	<u>5.0%</u>	<u>12.1%</u>	<u>12.7%</u>	<u>3.2%</u>	<u>2.5%</u>	<u>10.6%</u>	<u>100.0%</u>
Total (2)	35.6%	3.1%	7.7%	14.4%	13.7%	3.8%	3.8%	17.8%	100.0%

(1) Includes Information, Construction, and Public Administration.

(2) Excludes Agriculture and Natural Resources Categories.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

Table 15
I-80/880 Corridor Employment Comparison 2010: Job Distribution by Industry
South Fremont/Warm Springs Area Study; EPS#20050

Industry	Oakland	Emeryville	San Leandro	Berkeley	Hayward	Union City	Newark	Fremont
Manuf, Wholesale & Trans.	22%	23%	34%	8%	35%	38%	36%	41%
Retail	6%	17%	16%	8%	12%	11%	21%	10%
Financial & Prof. Service	19%	22%	16%	19%	13%	11%	11%	17%
Health, Ed. & Rec. Service	35%	16%	25%	54%	28%	29%	23%	24%
Other (1)	18%	22%	9%	11%	12%	11%	9%	8%
Total (2)	100%	100%	100%	100%	100%	100%	100%	100%

(1) Includes Information, Construction, and Public Administration.

(2) Excludes Agriculture and Natural Resources Categories.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

More than 94,000 jobs are located in Fremont, accounting for 18 percent of total Corridor employment. Fremont's economy has historically been linked to traditional industrial and distribution uses, though technology-related industrial uses have become an increasing part of its employment base over the last twenty years. Over 40 percent of the jobs, about 39,000 jobs, are in manufacturing, wholesale, and transportation, with other significant employment in the health, education, and recreation services, and financial and professional service categories (see **Table 16**). Fremont accounts for about one in four of the manufacturing, wholesale, and transportation jobs along the corridor.

Table 16: Fremont 2010 Demographic and Economic Summary

Item	#	%
Population	214,089	
Households	71,004	
Employed Residents	104,270	
Jobs		
Ag & Natural Resources	70	0%
Manuf, Wholesale & Trans.	38,780	41%
Retail	9,210	10%
Financial & Prof. Service	16,290	17%
Health, Ed. & Rec. Service	22,670	24%
Other (1)	<u>7,420</u>	<u>8%</u>
Total	94,440	100%

(1) Includes Information, Construction, and Public Administration.

Sources: U.S. Census Bureau, 2010; ABAG Projections, 2009; Economic & Planning Systems, Inc.

While much of Fremont's existing development occurred before 1990, the rapidly expanding Silicon Valley economy of the 1990s pushed its geographic boundaries outward. Between 1995 and 2000, Fremont added 33,000 jobs, equivalent to about 12 percent of the Santa Clara and San Mateo County job growth over the same period. New industrial job growth in Fremont since 1990 has increasingly been driven by technology sectors, including the communications and computer manufacturing sector, the biotech sector, and, more recently, the clean tech sector.

The downturn of the early 2000s had a significant impact on Fremont, in part because of its increasing focus on technology companies. The City has, however, continued to maintain a diverse industrial base over the last decade, providing a stable environment for ongoing operations, opportunities for expansion, and attractive opportunities for new firms, including a number of publicly and privately supported clean tech firms over the two to three years.

The current distribution of jobs in the City of Fremont is most similar to the neighboring cities like Union City and Newark. Fremont's employment has a higher concentration of industrial employment and a lower concentration of financial and professional services, and health, education, and recreational services compared to Silicon Valley's employment distribution.

Fremont's Key Assets

The competition for industrial jobs is strong, with competition from overseas, other lower cost of business States, other regions in California, and other cities in the Bay Area. Like Fremont, many cities are seeking to balance the competing demands for land from residential, retail, office, and industrial uses, while expanding their economic base and improving their fiscal situation. The City of Fremont will need to build off its existing strengths if it wishes to maintain and grow its diverse economic base. More specifically, the City will need to identify its place in the global competition for industrial jobs and protect its core assets. For firms considering locating in the San Francisco Bay Area, the City offers the following key assets.

Location

Fremont is located to the east of the San Francisco Peninsula, north and east of parts to Silicon Valley, and at the southern edge of the I-80/880 Corridor. The City is served by Bay Area Rapid Transit, providing access throughout the East Bay and to San Francisco and the Peninsula. Fremont's central Bay Area location provides good accessibility for logistics and distribution businesses and provides easy access to the City of Fremont for the labor force from the Silicon Valley, Peninsula, and bedroom Tri-Valley communities.

Fremont is located within 18 miles of the Lawrence Livermore National Laboratory and Sandia National Laboratory. These institutions are science and engineering-oriented technology innovation hubs that conduct significant R&D efforts. In addition, Fremont is close to the Bay Area's universities, including Stanford, Berkeley, and San Jose State. The 20,000-student Ohlone College is located in Fremont and offers three biotech certificates. Fremont is also centrally located between the three largest airports in the Bay Area, enabling easy national and international access. These airports are San Francisco International to the west, Oakland International to the north, and San Jose International to the south. Fremont is also close to the Port of Oakland.

Vacant Land

Although Fremont has developed the majority of its developable land like many surrounding cities, tracts of vacant land still exist. With a total area of 92 square miles, Fremont has been a desirable destination for companies seeking larger plots of land and developers seeking to use these opportunities. The government has also earned a reputation as business-friendly and helpful in its assistance of development and promoting economic growth. As the City continues to evolve, it will become increasingly important to protect compatible uses and direct future growth effectively.

Land Values and Lease Rates

Historically, Fremont's land values have been more in line with the other cities along the I-80/880 Corridor and below those of Silicon Valley and the Peninsula. As a result, Fremont has been a sought-after destination for residents and businesses seeking affordable land or building space.

Skilled Labor Force

Fremont's educated and diverse labor force helps to maintain the City's competitive edge. As illustrated in **Table 17**, more than 43 percent of the population has at least a bachelor's degree, 65 percent above the State average. The City also has an entrepreneurial culture, with a significant number of small home-based businesses operating in the City.

Table 17: Fremont's Population and Educational Attainment (2010)

Item	Fremont		California	
	#	%	#	%
High School Degree or Below	38,767	28.5%	9,231,195	43.3%
Some College/Associate Degree	38,679	28.4%	6,397,739	30.0%
Bachelor's Degree	36,068	26.5%	3,640,157	17.1%
Master's Degree	17,426	12.8%	1,287,844	6.0%
Doctorate Degree	<u>5,302</u>	<u>3.9%</u>	<u>741,965</u>	<u>3.5%</u>
Total	136,242	100.0%	21,298,900	100.0%
Unemployment	4,135	3.9%	1,235,679	7.0%

Sources: Claritas, Economic & Planning Systems, Inc.

Existing Industries

Fremont's skilled labor force has allowed the City to attract a broad range of industries. Major industries in Fremont include biotech, high tech, and a range of other firms that chose to locate research, assembly, and production facilities. The City of Fremont has been home to the facilities of some of the largest companies in the Bay Area, including Lam Research, Boston Scientific, 3ParData, and, ASI Corp. It also includes a number of prominent clean tech firms, including Solyndra, Deeya Energy, and Tesla. The large base of Fremont's existing industries presents expansion opportunities and additional appeal to attract new tenants.

Quality of Life

Fremont ranks high for its schools, "family-friendliness," and historic neighborhoods. The City's well-tended large parks system includes Lake Elizabeth in Central Park. Fremont includes a range of housing types appropriate for various income levels, ranging from executive housing to more affordable housing options.

Fremont's Driving Industries

Driving clusters are defined as concentrations of industries that have at least two of the following characteristics: high location quotient indicative of specialization,⁴ high growth, or high employment indicative of industries that provide a sizable number of jobs. Driving cluster sectors are those that go beyond providing goods and services locally, such as retail and government services. A 2008 analysis by ICF explored the scale, recent growth rates, and concentrations of employment in driving industry clusters in the City of Fremont. This analysis provided strong indications of the clusters with the potential to lead job growth in the City. The findings of the analysis have been modified slightly to reflect some of the changes over the last two years. This section summarizes the key findings of the analysis.

Driving Industry Clusters and Recent Growth

Fremont's key driving clusters include:

- Biotechnology/Biomedical
- Clean Technology
- Computer and Communications Hardware
- Distribution and Logistics
- Diversified Industrial Support
- Software and Communications Technology
- Health Services
- Professional Services

With the exception of professional and health services, the large majority of jobs in each of these clusters are concentrated in the core industrial areas that include Ardenwood, Baylands, and Warm Springs. Professional and health services are concentrated in the City Center and other non-core industrial areas.

The City experienced growth in a number of its industry clusters before the current downturn. The ICF analysis identified strong job growth in all the City's driving industries with the exception of diversified industrial support (traditional manufacturing) and software and communications technology.

Growth rates were very strong in computer and communications manufacturing, professional services, and clean tech and strong in distribution and logistics and health services. The biotechnology sector also grew though was recently set back by the departure of some of the City's large biotech tenants.

Future Growth Prospects

For the core industrial areas, the computer and communications hardware manufacturing, biotechnology, clean technology, and distribution and logistics clusters have the strongest growth prospects. These clusters are all driving industries, have an existing presence, and have shown

⁴ If a location has a specialization in a certain industry then it is likely that they are exporting—serving beyond the local demand and therefore the industry is bringing in outside money to the local economy.

strong recent growth. The concentration of these clusters by subarea is presented in **Table 18** and described below.

- **Computer/Communications Manufacturing.** Fremont's computer and communications manufacturing cluster includes technology-related, generally high-value added manufacturing that supports the Bay Area's information technology and electronics industry. This cluster, as of 2007, provided about 26,000 jobs in Fremont, the most of all the driving clusters. It is dominated by the communications equipment manufacturing and semiconductor and electronic component manufacturing sectors. Several of the firms in this cluster are headquartered in Fremont, such as Lam Research and Logitech.
- **Distribution and Logistics.** The distribution and logistics cluster is composed of businesses that either directly engage in or facilitate the transportation or warehousing of products, including the scheduled air transportation, railroads, freight trucking, and warehousing industries. This cluster represents a significant source of employment in Fremont, at about 13,000 employees. This cluster, concentrated in Fremont and other East Bay communities, supports not only local but also far-reaching Bay Area-wide clusters. Fremont's cluster has three times the concentration of employment relative to the State average.
- **Biotechnology/Biomedical.** Fremont's biotechnology/biomedical cluster includes a number of industry sectors related to the life-sciences industry with a primary focus on medical instrument manufacturing and R&D. Fremont's biotechnology/biomedical cluster provided over 5,000 jobs in 2008, a concentration above the State average. Despite reduction of employment resulting from closures during the recession and increasing competition from numerous cities in the Bay Area, the City has maintained a strong presence of firms in this cluster. One example of firms with significant employment and/or high levels of venture capital funding is Zosano.
- **Clean Technology.** This cluster is loosely defined as including a diversity of sectors related to energy efficiency, alternative energy, and "greener" business practices and/or technologies. The Bay Area is already an important leader in this emerging new cluster. Fremont has recently captured clean tech firms, particularly those engaged in activities around solar energy. In 2007, Solyndra, a thin-film solar manufacturer, moved to Fremont, as did Solaria, a solar R&D operation with significant venture capital backing. More recently, Tesla announced that it plans to manufacture a new electric car at the NUMMI site. This cluster has significant potential for growth in Fremont.

For areas in Fremont outside of the core industrial areas, health services and professional services offer the strongest growth prospects. These clusters represent driving industries that have an existing presence and have shown strong recent growth. They typically associate with high-paying jobs and will likely result in additional space needs for office and medical office space in the City. Descriptions for these industries are provided below:

- **Health Services.** Fremont's health services cluster includes direct patient care establishments such as hospitals, doctor and dentist offices, outpatient services, and home health care. The majority of these establishments in Fremont are situated in the City Center, around the BART station. There were nearly 10,000 health-related jobs in Fremont in 2007

Table 18
Subarea Specialization District Quotient
South Fremont/Warm Springs Area Study; EPS#20050

Item	Ardenwood	Baylands	Warm Springs	Downtown CBD	Other Districts (1)
Biotechnology/Biomedical	2.49	1.96	0.48	0.13	0.36
Clean Technology	na	0.57	2.09	na	0.06
Computer and Communications Manufacturing	1.89	1.17	1.29	na	0.10
Distribution & Logistics	0.56	1.83	0.78	0.02	0.92
Diversified Industrial Support	0.00	0.34	2.17	0.04	0.28
Health Services	0.12	0.02	0.03	5.71	2.66
Professional Services	0.49	0.31	0.36	2.90	3.08
Software and Communications Technology	0.35	1.17	0.84	0.32	1.99

Note: Location quotient (LQ) indicates cluster concentration by subarea. A location quotient greater than 1 indicates a specialization above the city average.

(1) Include Irvington, Mission San Jose, and Niles.

Sources: ICF International; Economic & Planning Systems, Inc.

with the most notable tenants including Washington Hospital, Kaiser Permanente, and Palo Alto Medical Center. These facilities have historically contributed to spillover demand for complimentary healthcare services, such as smaller private practices, testing labs, and specialized treatment facilities. The health services industry is one of the least cyclically vulnerable and is likely to continue expanding in Fremont.

- **Professional Services.** This cluster includes financial, scientific, and technical services, such as investment and real estate brokerages, accounting and engineering firms, and management and legal services. This cluster exhibited the highest rate of growth during the last decade. Most of the employment in this industry sector is made up by small companies with corporate headquarters in Fremont limited. The largest share of employment exists in real estate, followed by credit intermediation, and architectural and engineering services with Fremont Bank and Greenstein, Rogoff, Olsen & Company as the most notable tenants. This cluster is likely to continue its growth in the foreseeable future.

Real Estate Context

This section provides the current regional office/industrial real estate context followed by the City's real estate profile. The existing stock of real estate provides an indication of the manner in which development in the region and the City has responded to job growth in the past. Current market indicators provide a sense of the potential for existing real estate to accommodate new growth as well as the current performance of different types of workspace-accommodating real estate.

Regional Real Estate Profile

Interstate 80/880 Corridor

Workspace along the I-80/880 Corridor has developed in response to economic growth. The corridor currently includes 224 million square feet of non-retail workspace. Following a period of economic contraction during the early part of the decade, workspace real estate trends have improved in the I-80/880 Corridor, as well as in the City of Fremont, but have weakened after the 2007-2008 period. The large existing inventory of vacant space and the low lease rates have limited new construction during the last five years.

Office

There are approximately 29 million square feet of office space on the I-80/880 Corridor. This represents about 13 percent of the non-retail workspace along the Corridor (see **Table 19**). The majority of this office space is located in Oakland. Driven by the technology-based economic expansion and associated job growth of the late 1990s, approximately 1 million square feet of office development occurred in the I-80/880 Corridor over the last decade. The I-80/880 Corridor office market is significantly smaller than that of Silicon Valley, which has 3.6 times more office space.

Table 19
Bay Area Workspace Allocation (Q2 2010)
South Fremont/Warm Springs Area Study; EPS#20050

Market	Office sq.ft.	R&D sq.ft.	Warehouse sq.ft.	Manufacturing sq.ft.	Total sq.ft.
East Bay 80/880 Corridor Distribution	29,267,467 13%	32,155,949 14%	75,702,083 34%	87,006,681 39%	224,132,180 100%
San Mateo County	31,660,704	18,500,439	26,445,953	40,025,892	116,632,988
Santa Clara County	<u>72,431,169</u>	<u>131,582,924</u>	<u>32,644,897</u>	<u>53,302,302</u>	<u>289,961,292</u>
Silicon Valley Total	104,091,873	150,083,363	59,090,850	93,328,194	406,594,280
Distribution	26%	37%	15%	23%	100%
Fremont	2,398,872	20,361,707	8,026,308	9,565,229	40,352,116
Distribution	6%	50%	20%	24%	100%
Fremont as % of 80/880 Corridor	8%	63%	11%	11%	18%
Fremont as % of Silicon Valley	2%	14%	14%	10%	10%

Notes: NAI BT Commercial merged with Cassidy Turley at the beginning of 2010. Cassidy Turley BT maintains a historical building records; however, comparison of previous reports to those after the merger may show different statistics due to reclassification of buildings and revised building sizes.

Sources: NAI BT Commercial; Economic & Planning Systems, Inc.

The I-80/880 Corridor has historically maintained higher vacancies and lower lease rates compared to Silicon Valley. During the peak of the market in 2000, the average lease rate per square foot reached \$3.33, a 120 percent increase over a five-year period with the vacancy rate at 5.5 percent. The equivalent lease rates for Silicon Valley were \$6.54 with a vacancy rate of 3.5 percent (see **Table 20**).

As job growth came to an abrupt end, so did plans for office development. Negative net absorption⁵ during 2001 and 2002 resulted in increased vacancies and downward pressure on lease rates. By 2004, rents had fallen back to \$1.82 per square foot with vacancy at 16.8 percent. The I-80/880 Corridor market has been slowly recovering since 2004 with rents increasing to \$2.39 per square foot and vacancies at 16.3 percent by 2008 (see **Table 20**).

However, office conditions have weakened since associated with the Great Recession, with Q2 2010 rents reducing to \$2.16 per square foot and vacancies increasing to 17.7 percent. The total vacant office space along the Corridor is 5.2 million square feet as of mid-2010 (see **Table 21**).

Research and Development (R&D)

There are approximately 32 million square feet of R&D space on the I-80/880 Corridor, with over 60 percent of this space or 20 million square feet located in Fremont (see **Table 19**). For this discussion, "R&D" space includes traditional research and development facilities featuring wet or dry labs and "heavy office" facilities that include exceptional power, cooling, and flooring to accommodate massive computer systems. It also includes R&D Flex space that may include traditional office and/or manufacturing space within the same building.

Driven by the technology-based economic expansion and employment growth of the late 1990s, the I-80/880 Corridor's R&D market experienced strong growth. The greatest absolute increase in supply occurred in 1999 and 2000, with negligible new construction since 2001.

Consistent with the broader Bay Area trend, though less so than other workspace categories, the R&D market has shown signs of improvement through rent appreciation with rents reaching \$1.12 per square foot by 2008. However, rents have decreased since with Q2 2010 rents at \$0.89 per square foot. It is worth mentioning that R&D vacancies have been relatively stable, ranging between 20 and 24 percent (see **Table 22**). Such high vacancies suggest that the R&D market has been oversupplied with space inventory that has not been fully utilized over the last decade.

A portion of R&D development is partially attributed to the interest of smaller firms in the software, bioscience, and innovation services sectors in the affordable workspace available. Broker interviews indicate that demand is the strongest for smaller R&D spaces in Fremont and elsewhere in Silicon Valley. This notion is supported by the recent office flex/R&D condo trend attributed to smaller firms looking for affordable workspace and ownership opportunities.

⁵ Change in occupied building square footage in a given time period.

Table 20
Office Lease and Vacancy Rates 1995-2010
South Fremont/Warm Springs Area Study; EPS#20050

Market	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Q2 2010
East Bay 80/880 Corridor																
Average Annual Lease Rate	\$1.51	\$1.56	\$1.64	\$1.80	\$1.96	\$3.33	\$2.46	\$1.93	\$1.84	\$1.82	\$1.91	\$2.08	\$2.26	\$2.39	\$2.14	\$2.16
Average Annual Vacancy	10.9%	10.7%	7.5%	7.3%	4.8%	5.5%	13.8%	17.7%	17.0%	16.8%	15.1%	13.8%	14.0%	16.3%	17.7%	17.7%
Silicon Valley																
Average Annual Lease Rate (1)	\$2.10	\$2.24	\$2.79	\$3.02	\$3.47	\$6.54	\$3.23	\$2.55	\$2.16	\$2.09	\$2.13	\$2.36	\$2.76	\$3.07	\$2.65	\$2.59
Average Annual Vacancy	5.6%	3.9%	3.0%	7.5%	3.5%	3.5%	13.1%	16.1%	17.5%	14.0%	12.1%	11.0%	10.5%	17.1%	19.1%	18.2%
Fremont																
Average Annual Lease Rate	\$1.20	\$1.40	\$1.70	\$1.90	\$2.00	\$4.00	\$2.70	\$2.20	\$1.98	\$1.97	\$2.16	\$2.25	\$2.20	\$2.21	\$2.29	\$2.11
Average Annual Vacancy	1.8%	8.3%	3.0%	5.4%	8.7%	2.9%	6.1%	8.5%	6.9%	7.0%	5.5%	6.3%	8.5%	10.8%	13.8%	14.1%

Notes: NAI BT Commercial merged with Cassidy Turley at the beginning of 2010. Cassidy Turley BT maintains a historical building records; however, comparison of previous reports to those after the merger may show different statistics due to reclassification of buildings and revised building sizes.

(1) Due to the lack of data available for the Silicon Valley area, the average between San Mateo and Santa Clara Counties is applied between 1995 and 1999.

Sources: NAI BT Commercial; Economic & Planning Systems, Inc.

Table 21
Bay Area Vacant Workspace Allocation (Q2 2010)
South Fremont/Warm Springs Area Study; EPS#20050

Market	Vacant Square Footage				Total
	Office	R&D	Warehouse	Manufacturing	
East Bay 80/880 Corridor Distribution	5,173,910 19%	7,272,419 27%	8,357,324 31%	6,365,817 23%	27,169,470 100%
Silicon Valley Distribution	18,701,003 32%	26,069,430 44%	6,133,208 10%	8,090,953 14%	58,994,594 100%
Fremont Distribution	338,545 6%	4,545,900 76%	624,393 10%	484,347 8%	5,993,185 100%
Fremont as % of 80/880 Corridor	7%	63%	7%	8%	22%
Fremont as % of Silicon Valley	2%	17%	10%	6%	10%

Notes: NAI BT Commercial merged with Cassidy Turley at the beginning of 2010. Cassidy Turley BT maintains a historical building records; however, comparison of previous reports to those after the merger may show different statistics due to reclassification of buildings and revised building sizes.

Sources: NAI BT Commercial; Economic & Planning Systems, Inc.

Table 22
I-80/880 Corridor Industrial Market Lease and Vacancy Rates, 2004 - 2010
South Fremont/Warm Springs Area Study; EPS#20050

Item	2004	2005	2006	2007	2008	2009	Q2 2010
R&D							
Average Annual Lease Rate (NNIN)	\$0.84	\$0.84	\$0.91	\$1.07	\$1.12	\$0.92	\$0.89
Average Annual Vacancy	20.2%	22.0%	23.4%	22.2%	21.0%	22.8%	22.6%
Warehouse							
Average Annual Lease Rate (NNIN)	\$0.35	\$0.39	\$0.43	\$0.47	\$0.45	\$0.40	\$0.38
Average Annual Vacancy	8.2%	6.6%	4.4%	5.2%	7.9%	10.9%	11.0%
Manufacturing							
Average Annual Lease Rate (NNIN)	\$0.45	\$0.51	\$0.55	\$0.58	\$0.55	\$0.47	\$0.44
Average Annual Vacancy	5.5%	5.1%	5.6%	5.0%	6.2%	6.9%	7.3%

Notes: NAI BT Commercial merged with Cassidy Turley at the beginning of 2010. Cassidy Turley BT maintains a historical building records; however, comparison of previous reports to those after the merger may show different statistics due to reclassification of buildings and revised building sizes.

Sources: NAI BT Commercial; Economic & Planning Systems, Inc.

Warehouse and Manufacturing

Warehouse and manufacturing categories include heavier industrial uses relative to R&D. Both of these categories generally feature open floor plans, high ceilings, and roll-up doors for loading and unloading freight. Warehouse space is typically used for storage and is characterized by docks or grade doors, minimal tenant improvements, and limited glass. Manufacturing space is used for production purposes with structures typically including three sides of concrete and one side of glass and limited tenant improvements.

There are approximately 76 million square feet of warehouse and 87 million square feet of manufacturing in the I-80/880 Corridor. These markets respectively account for 34 and 39 percent of the Corridor's non-retail workspace inventory, a strong indication of the County's historical focus on heavy industry and distribution (see **Table 19**).

As is typical, warehouse and manufacturing workspace along the I-80/880 Corridor generates lower rents than office and R&D. Vacancy rates have also been consistently lower than R&D vacancy rates, with the economic downturn weakening market conditions in both of these workspace types. Average warehouse and manufacturing rents were \$0.38 and \$0.44 per square foot by Q2, 2010 with vacancies at 11.0 and 7.3 percent, respectively (see **Table 22**).

Silicon Valley

Silicon Valley is one of the largest employment centers in the Bay Area and the State, accounting for over 1.2 million jobs and nearly 407 million square feet of non-retail workspace, including 104 million square feet of office, 150 million square feet of R&D space, and 152 million square feet of warehouse and manufacturing space (see **Table 19**). Silicon Valley is the Bay Area's largest R&D market, with the majority of the R&D building space in Santa Clara County. Silicon Valley's workspace exceeds that of the I-80/880 Corridor by over 80 percent, with significantly more office, R&D and manufacturing space, although it has less warehouse space.

Similar to the I-80/880 Corridor, Silicon Valley workspace has exhibited gradual improvement since 2004 with a decline after 2008. Even though rents have not justified significant new construction since 2005,⁶ the overall market indicators have displayed improvement with rents and vacancy improving among all uses after 2004. However, the trends reversed in 2008, with rents decreasing and vacancies increasing (see **Table 23**). Market indicators in Silicon Valley's office, R&D and manufacturing uses have historically been stronger relative to the I-80/880 Corridor, though vacancy rates of manufacturing space in Silicon Valley are still above those in the I-80/880 Corridor.

⁶ New construction often occurs as existing rents rise above the threshold sufficient to cover construction costs and associated minimum return on investment. Development pressure reflects increasing rents.

Table 23
Silicon Valley Lease and Vacancy Rates, 2000 - 2010
South Fremont/Warm Springs Area Study; EPS#20050

Item	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Q2 2010
R&D											
Average Annual Lease Rate (NNN)	\$4.10	\$1.50	\$1.10	\$0.87	\$0.75	\$0.83	\$0.99	\$1.26	\$1.26	\$1.03	\$0.99
Average Annual Vacancy	4.0%	17.3%	22.3%	24.7%	24.0%	22.5%	18.3%	16.6%	16.3%	19.3%	19.1%
Warehouse											
Average Annual Lease Rate (NNN)	\$0.77	\$0.64	\$0.37	\$0.38	\$0.38	\$0.40	\$0.42	\$0.50	\$0.50	\$0.43	\$0.43
Average Annual Vacancy	4.4%	12.6%	16.7%	18.1%	15.3%	11.0%	7.4%	5.4%	6.0%	8.1%	8.8%
Manufacturing											
Average Annual Lease Rate (NNN)	\$1.57	\$1.15	\$0.85	\$0.55	\$0.60	\$0.66	\$0.68	\$0.78	\$0.75	\$0.62	\$0.61
Average Annual Vacancy	3.9%	10.1%	11.3%	11.7%	10.5%	9.8%	8.0%	5.8%	6.4%	7.9%	7.9%

Notes: NAI BT Commercial merged with Cassidy Turley at the beginning of 2010. Cassidy Turley BT maintains a historical building records; however, comparison of previous reports to those after the merger may show different statistics due to reclassification of buildings and revised building sizes.

Source: NAI BT Commercial; Colliers International; Economic & Planning Systems, Inc.

Fremont's Real Estate Profile

Workspace Market Trends

The City of Fremont has 40 million square feet of non-retail workspace, accounting for 18 percent of the I-80/880 Corridor total. Various workspace clusters are scattered through the City. Irvington, Niles, and Mission San Jose business districts support primarily retail and smaller office spaces. The more retail-oriented business districts also include some low-rise office buildings with smaller spaces accommodating healthcare, financial services, and real estate personnel tenants. The City Center and Centerville also include retail development, though with larger office clusters. The Ardenwood, Baylands and Warm Springs are three of the City's major workspace districts. They include the large majority of industrially zoned land, including warehouse, manufacturing, and R&D Flex space as well as some one- and two-story office campus developments.

During the late 1990s, as the Bay Area economy expanded rapidly, the City of Fremont's competitive advantage was based on its proximity to Silicon Valley and its relative affordability. As a result, firms located R&D, production, and assembly functions in Fremont. Significant new R&D development occurred during this period. At the same time, the City experienced relatively limited office development. Fremont's office and industrial segment trends are described below and are summarized in **Table 24**.

Office

The City currently has a total of about 2.4 million leasable square feet of office space tracked by major brokerage firms, representing about 6 percent of the City's non-retail workspace (see **Table 19**). Much of this space is located in the City Center and Centerville. This space primarily consists of office buildings occupied by financial, real estate and health-related services. These services have historically located in the City Center. Additional office and medical office space in smaller office buildings is disbursed throughout the City's business and commercial centers with increasing amounts of office uses locating in the lower cost industrial areas in recent years.

The City's office space has historically commanded lower lease rates and vacancy rates compared to the Silicon Valley average. Office vacancies in Fremont have been in the single digits for at least 13 years because 1995 and 2007, in part because of the limited supply. However, vacancies have increased to double digits as of 2009 reaching 14.1 percent by mid-2010.

There are approximately 339,000 square feet of available office space in larger office buildings in Fremont. Similar to the broader regional trends, Fremont's office market peaked in 2000 with an average lease rate of \$4.00 per square foot and a vacancy rate of 2.9 percent and bottomed out in 2003 with an average lease rate of \$1.98 per square foot and a vacancy rate of 6.9 percent; it has since increased again to \$2.25 per square foot and 6.3 percent vacancies and has softened to rents of \$2.11 per square foot by Q2 2010 (see **Table 24**).

Table 24
Fremont Real Estate Summary, 2004 - 2010
South Fremont/Warm Springs Area Study; EPS#20050

Item	2004	2005	2006	2007	2008	2009	Q2 2010
Office							
Tracked Inventory (sq.ft.)	n/a	2,170,160	2,317,854	2,317,854	2,341,402	2,382,912	2,398,872
Average Annual Lease Rate (NNN)	\$1.97	\$2.16	\$2.25	\$2.20	\$2.21	\$2.29	\$2.11
Average Annual Vacancy	7.0%	5.5%	6.3%	8.5%	10.8%	13.8%	14.1%
Net Absorption	n/a	n/a	n/a	n/a	n/a	n/a	n/a
New Construction	n/a	n/a	n/a	n/a	n/a	n/a	n/a
R&D							
Tracked Inventory (sq.ft.)	n/a	20,490,566	20,658,376	20,997,228	21,179,410	20,871,582	20,361,707
Average Annual Lease Rate (NNN)	n/a	\$0.82	\$0.86	\$0.93	\$1.04	\$0.87	\$0.82
Average Annual Vacancy	21.3%	21.5%	22.1%	21.2%	20.7%	23.9%	22.3%
Net Absorption	475,327	(67,993)	(212,356)	468,590	(57,957)	(602,915)	372,051
New Construction	0	69,372	0	0	220,542	0	0
Warehouse							
Tracked Inventory (sq.ft.)	n/a	8,003,447	8,301,772	8,306,295	8,011,039	8,039,143	8,026,308
Average Annual Lease Rate (NNN)	n/a	\$0.43	\$0.43	\$0.48	\$0.51	\$0.46	\$0.43
Average Annual Vacancy	13.7%	11.1%	9.0%	7.4%	5.6%	6.1%	7.8%
Net Absorption	615,680	175,499	190,404	118,628	167,970	(15,910)	(162,005)
New Construction	0	0	0	0	0	0	0
Manufacturing							
Tracked Inventory (sq.ft.)	n/a	9,154,017	9,011,782	8,974,095	9,236,349	9,522,625	9,565,229
Average Annual Lease Rate (NNN)	n/a	\$0.55	\$0.61	\$0.67	\$0.69	\$0.62	\$0.57
Average Annual Vacancy	9.2%	8.1%	8.2%	3.4%	5.6%	5.2%	5.1%
Net Absorption	59,838	115,571	28,584	277,059	(173,054)	392,629	1,425
New Construction	0	0	0	24,643	0	338,000	0

Notes: NAI BT Commercial merged with Cassidy Turley at the beginning of 2010. Cassidy Turley BT maintains a historical building records; however, comparison of previous reports to those after the merger may show different statistics due to reclassification of buildings and revised building sizes.

Sources: NAI BT Commercial; Economic & Planning Systems, Inc.

R&D

The City of Fremont accounts for a significant proportion of the regional R&D inventory, comprising 63 percent of the I/80-880 Corridor and 14 percent of the Silicon Valley totals. The City's 20 million square feet of leasable R&D space exceed its office, warehouse, and manufacturing space combined. The majority of this space is located in the Ardenwood, Baylands, and Warm Springs Business Districts. The space primarily consists of one- to three-story buildings in business parks, occupied by various tenants, including many in the life science and information technology industries.

Over 20 percent of the R&D space has been left vacant since the market downturn of 2001 with vacancy rates fluctuating between 20 and 24 percent between 2001 and 2010. Fremont's R&D market has only posted positive absorption in 2004 and 2007, although mid-2010 absorption has also been positive. An average net absorption in Fremont over the last 10 years was negative 300,000 square feet (see **Table 25**). Lease rates have been declining since 2008 to \$0.82 per square foot by Q2 2010, while vacancies have been increasing (see **Table 26**). Fremont's R&D component has historically had the highest vacancies compared to the other commercial uses and currently accounts for 4.5 million square feet of vacant space (see **Table 21**).

Warehouse and Manufacturing

There are 8.0 million square feet of warehouse space and 9.6 million square feet of manufacturing space in the City of Fremont, significantly less than its R&D inventory. Fremont's warehouse and manufacturing spaces account for 11 percent each of the corridor total. The market's downturn in 2008 resulted in increasing vacancy rates and decreasing lease rates between 2008 and 2010. Vacancies remained in single figures in the warehouse and manufacturing sector in mid-2010, at 7.8 and 5.1 percent respectively, indicating greater stability in these sectors than in the R&D sector (see **Tables 25 and 26**).

Employment Growth and Space Needs

This section describes job projections for the City of Fremont through 2035. It also translates these projections into an estimate of future workspace need. These space needs are compared with the City's industrial and office building space vacancies and additional land development capacity in subsequent sections.

Regional Projections

ABAG provides countywide and citywide policy-based projections for San Francisco Bay Area jurisdictions. The ABAG Projections documents, published every two years, provide the latest summary of ABAG's population, household, and jobs projections. ABAG's employment projections include full- and part-time jobs by place of work. Employment estimates include wage, salary, and self-employed workers, with job sectors defined using classifications from the North American Industrial Classification System (NAICS).

The I-80/880 Corridor economy is forecasted to expand from about 531,000 to 758,000 jobs over the next 25 years according to the ABAG Projections 2009 forecast. This represents an increase of about 43 percent or roughly 228,000 new jobs. Similar to the Fremont trend, the largest growth in jobs is expected to occur in service jobs, including health, education,

Table 25

Industrial Net Absorption and New Construction Trends (sq.ft.), 2001-2010
South Fremont/Warm Springs Area Study; EPS#20050

Item	2001	2002	2003	2004	2005	2006	2007	2008	2009	Q2 2010
R&D										
Net Absorption										
I-80/880 Corridor	(2,277,646)	(1,688,470)	(136,956)	344,016	(414,945)	(724,158)	714,540	184,416	(443,981)	29,558
Silicon Valley	(14,802,802)	(8,947,842)	(2,434,919)	780,024	3,760,935	2,075,021	2,746,128	861,176	(4,967,025)	145,213
Fremont	(1,845,854)	(1,448,615)	(23,377)	475,327	(67,993)	(212,356)	468,590	(57,957)	(602,915)	372,051
New Construction										
I-80/880 Corridor	680,428	474,831	47,310	12,070	97,908	0	245,000	220,542	0	0
Silicon Valley	2,289,881	625,522	0	228,199	421,710	0	0	578,562	0	0
Fremont	145,474	434,984	0	0	69,372	0	0	220,542	0	0
Warehouse										
Net Absorption										
I-80/880 Corridor	(4,355,436)	572,784	(2,082,027)	2,334,348	1,323,859	1,565,339	(984,929)	(985,575)	(2,097,495)	(630,050)
Silicon Valley	(2,819,301)	(404,112)	(1,003,275)	(139,006)	1,468,011	1,117,037	780,785	(230,775)	(757,683)	(432,433)
Fremont	(527,770)	(542,495)	(511,454)	615,680	175,499	190,404	118,628	167,970	(15,910)	(162,005)
New Construction										
I-80/880 Corridor	843,808	65,000	68,400	0	0	0	107,000	40,000	122,000	0
Silicon Valley	708,223	0	0	0	0	0	0	0	0	0
Fremont	70,552	0	0	0	0	0	0	0	0	0
Manufacturing										
Net Absorption										
I-80/880 Corridor	(1,003,226)	(1,359,864)	(145,450)	574,765	604,247	(429,497)	(984,929)	(985,575)	(2,097,495)	(630,050)
Silicon Valley	(3,253,108)	(616,743)	217,025	979,039	263,453	413,608	(99,038)	(778,027)	(598,660)	(44,483)
Fremont	(283,207)	(595,032)	325,968	59,838	115,571	28,584	277,059	(173,054)	392,629	1,425
New Construction										
I-80/880 Corridor	1,243,872	148,511	186,272	145,477	173,211	600,800	107,000	40,000	122,000	0
Silicon Valley	193,718	42,387	42,095	0	73,343	0	24,643	0	338,000	0
Fremont	41,000	22,300	42,095	0	0	0	24,643	0	338,000	0

Notes: NAI BT Commercial merged with Cassidy Turley at the beginning of 2010. Cassidy Turley BT maintains a historical building records; however, comparison of previous reports to those after the merger may show different statistics due to reclassification of buildings and revised building sizes.

Sources: NAI BT Commercial; Economic & Planning Systems, Inc.

Table 26
Fremont Industrial Market Lease and Vacancy Rates, 2004 - 2010
South Fremont/Warm Springs Area Study; EPS#20050

Item	2004	2005	2006	2007	2008	2009	Q2 2010
R&D							
Average Annual Lease Rate (NNN)	n/a	\$0.82	\$0.86	\$0.93	\$1.04	\$0.87	\$0.82
Average Annual Vacancy	21.3%	21.5%	22.1%	21.2%	20.7%	23.9%	22.3%
Warehouse							
Average Annual Lease Rate (NNN)	n/a	\$0.43	\$0.43	\$0.48	\$0.51	\$0.46	\$0.43
Average Annual Vacancy	13.7%	11.1%	9.0%	7.4%	5.6%	6.1%	7.8%
Manufacturing							
Average Annual Lease Rate (NNN)	n/a	\$0.55	\$0.61	\$0.67	\$0.69	\$0.62	\$0.57
Average Annual Vacancy	9.2%	8.1%	8.2%	3.4%	5.6%	5.2%	5.1%

Notes: NAI BT Commercial merged with Cassidy Turley at the beginning of 2010. Cassidy Turley BT maintains a historical building records; however, comparison of previous reports to those after the merger may show different statistics due to reclassification of buildings and revised building sizes.

Sources: NAI BT Commercial; Economic & Planning Systems, Inc.

and recreation services, and financial and professional services. These projections suggest a shift from manufacturing, wholesale, and distribution toward service jobs, particularly in the health, education, and recreation category (see **Table 27**).

Silicon Valley is expected to continue its economic growth at a higher rate than the I-80/880 Corridor in the coming years. According to ABAG Projections 2009, approximately 666,000 new jobs are forecasted to be added by 2035 (see **Table 28**). Rapid growth industries include financial and professional services, and information, construction, and public administration with health, education, and recreation employment growing by the highest absolute number.

Industry leaders believe that companies in Silicon Valley have the opportunity to build upon existing expertise in technology to create new products and services. Venture capital investment is likely to provide new opportunities where biotech, nanotech, clean tech, and information technology firms have become an important aspect of the regional economy. While job growth is expected to occur in a number of different sized businesses, start-ups and small firms are expected to drive the next wave of economic expansion.⁷

Fremont's Employment Projections

ABAG Projections 2009 estimate that the City of Fremont will grow from 94,000 jobs in 2010 to 140,000 jobs in 2035. This growth will add 46,000 jobs over the next 25 years, an overall increase of about 49 percent (see **Table 29**). Compared to the projections for Silicon Valley, this job growth represents about 7 percent of the new jobs projected for Santa Clara and San Mateo Counties, a capture rate close to that experienced during the late 1990s. This job projection puts Fremont as the second highest employment growth city in absolute terms on the I-80/880 Corridor, only behind Oakland, and the sixth highest in the Bay Area. Fremont's projected rate of growth of 49 percent or 1.6 percent on average annually is above the I-80/880 Corridor average and below the Silicon Valley average.

Information, construction, and public administration jobs are expected to account for the largest growth rate, followed by health, education, and recreation, and the financial and professional services employment sector (see **Table 29**). This represents a proportionate shift from the more traditional industrial sector to a range of service jobs, though the manufacturing, wholesale, and transportation category is still expected to remain the largest sector in 2035 with 36 percent of all City jobs compared to 41 percent in 2010.

Like all projections, the ABAG projections represent, by definition, growth projections relating to an uncertain future. Based on a region-wide model, the projections tend to be more accurate the larger the area considered, and become less so as the area of study becomes smaller. Historically, the ABAG projections have tended to be optimistic, and, as a result, these job growth projections for the City of Fremont are considered optimistic projections.

⁷ San Jose Economic Development Strategy.

Table 27

I-80/880 Corridor Projected Employment Growth (2010-2035)*
South Fremont/Warm Springs Area Study; EPS#20050

Item	2010	2020	2035	2010-2035 Growth		
				#	#/Yr	%/Yr
Jobs						
Manuf, Wholesale & Trans.	143,240	161,390	194,100	50,860	2,034	36%
Retail	51,820	60,130	75,630	23,810	952	46%
Financial & Prof. Service	92,550	104,500	135,580	43,030	1,721	46%
Health, Ed. & Rec. Service	172,980	202,230	256,240	83,260	3,330	48%
Other (1)	<u>70,310</u>	<u>76,680</u>	<u>96,910</u>	<u>26,600</u>	<u>1,064</u>	<u>38%</u>
Total/Average (2)	530,900	604,930	758,460	227,560	9,102	43%

*Includes the Cities of Oakland, Emeryville, San Leandro, Berkeley, Hayward, Union City, Newark, and Fremont.

(1) Includes Information, Construction, and Public Administration.

(2) Excludes agriculture and natural resources jobs.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

Table 28
Silicon Valley Projected Employment (2010-2035)
South Fremont/Warm Springs Area Study; EPS#20050

Item	2010	2020	2035	2010-2035 Growth		
				#	#/Yr	%/Yr
Jobs						
Manuf, Wholesale & Trans.	346,860	396,780	469,200	122,340	4,894	35%
Retail	117,460	136,450	191,280	73,820	2,953	63%
Financial & Prof. Service	256,350	305,390	422,460	166,110	6,644	65%
Health, Ed. & Rec. Service	362,940	437,680	564,570	201,630	8,065	56%
Other (1)	162,580	193,670	264,570	101,990	4,080	63%
Total/Average (2)	1,246,190	1,469,970	1,912,080	665,890	26,636	53%
						1.7%

Note: Includes San Mateo and Santa Clara Counties.

(1) Includes Information, Construction, and Public Administration.

(2) Excludes agriculture and natural resources jobs.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

Table 29

**Fremont Projected Employment Growth (2010-2035)
South Fremont/Warm Springs Area Study; EPS#20050**

Item	2010	2020	2035	2010-2035 Growth		
				#	#/Yr	%/Yr
Population (1)	214,089	230,600	256,200	42,111	1,684	20%
Households (1)	71,004	76,790	86,000	14,996	600	21%
Employed Residents	104,270	121,480	156,340	52,070	2,083	50%
Jobs						
Manuf, Wholesale & Trans.	38,780	38,750	50,430	11,650	466	30%
Retail	9,210	10,820	11,780	2,570	103	28%
Financial & Prof. Service	16,290	16,550	25,020	8,730	349	54%
Health, Ed. & Rec. Service	22,670	26,380	39,360	16,690	668	74%
Other (2)	7,420	8,480	13,780	6,360	254	86%
Total (3)	94,370	100,980	140,370	46,000	1,840	49%

(1) 2010 Population and Household counts from Census 2010. Forecasts from ABAG Projections, 2009.

(2) Includes Information, Construction, and Public Administration.

(3) Total excludes Agriculture and Natural Resources category.

Sources: U.S. Census Bureau, 2010; ABAG Projections, 2009; Economic & Planning Systems, Inc.

Building Space Needs

Citywide Demand

The demand for work space is directly linked to the type and amount of employment growth. EPS has converted ABAG jobs projections for the City of Fremont into demand for building space based on assumptions regarding space needs by employee type. The allocation of jobs among building space categories is shown in **Table 30** and the space per employee assumptions used to convert employment into building area demand as well as results of the citywide space needs analysis are provided in **Table 31**, while **Table 32** shows the assumptions used to convert the City workspace demand into workspace needs.

- **Office.** Over the next 25 years a total of about 10,700 new jobs requiring non-medical office space are projected, representing an overall need for 2.9 million square feet of space. This represents about 117,000 square feet each year.
- **R&D.** Over the next 25 years a total of about 5,600 new jobs requiring R&D space are projected, representing an overall need for about 2.5 million square feet of building space. This represents about 100,000 square feet each year.
- **Warehouse/Manufacturing.** Over the next 25 years a total of about 10,000 new jobs requiring industrial space (manufacturing/warehouse/distribution) are projected, an overall need for about 7.0 million square feet of space or 280,000 square feet a year.
- **Medical Institutional/Office.** A total of about 6,000 new health care services jobs are projected, representing an overall need for about 1.7 million of building spaces over the next 25 years, equivalent to about 65,000 square feet a year. Based on typical ratios, about half of this growth would be accommodated within hospital/other institutional uses and half would occur in private medical office space. The implication is the need for about 850,000 square feet of medical office space, or about 32,500 square feet each year.

Future Industrial Development

This chapter considers the potential demand for R&D Flex, manufacturing, and warehouse/distribution space in the context of the potential locations in the City and draws baseline conclusions for the Warm Springs area.

Core Industrial Areas

The large majority of future R&D Flex, manufacturing, and warehouse/distribution uses will locate in one of the City's three core industrial areas: Ardenwood, Baylands, and Warm Springs. **Figure 16** shows the location and outline of each of the core industrial areas in the City.⁸ These areas comprise approximately 3,300 acres when public rights-of-way and wetlands

⁸ The outlined areas represent the industrial core of the three key districts as defined with input by City staff.

Table 30

**Building Space Allocation for Nonresidential Growth
South Fremont/Warm Springs Area Study; EPS#20050**

Industry Sector	Building Type						Other (1) Workspace
	Office	R&D	Warehouse/ Manufacturing	Retail	Medical Office/ Institutional	Other Institutional	
Ag & Natural Resources	5%	10%	25%	0%	0%	0%	60%
Manuf, Wholesale & Trans.	5%	25%	70%	0%	0%	0%	0%
Retail	10%	0%	10%	80%	0%	0%	0%
Financial & Prof. Service	75%	20%	0%	0%	0%	0%	5%
Health Care & Social Assist.	5%	0%	5%	0%	90%	0%	0%
Education & Rec. Service	20%	0%	10%	0%	0%	50%	20%
Other Sectors (2)	15%	15%	5%	0%	0%	50%	15%

(1) Includes people not requiring workspace, such as some construction workers, some agriculture workers, and persons who work from home.

(2) Includes Information, Construction, and Public Administration.

Source: Economic & Planning Systems, Inc.

Table 31

Fremont Projected Workspace Demand (2010-2035)
South Fremont/Warm Springs Area Study; EPS#20050

Item	Office (1)		R&D (2)		Warehouse/Manuf. (3)		Retail (4)	
	Jobs	Sq. Ft.	Jobs	Sq. Ft.	Jobs	Sq. Ft.	Jobs	Sq. Ft.
Ag & Natural Resources	0	0	0	0	0	0	0	0
Manuf, Wholesale & Trans.	583	160,188	2,913	1,310,625	8,155	5,708,500	0	0
Retail	257	70,675	0	0	257	179,900	2,056	822,400
Financial & Prof. Service	6,548	1,800,563	1,746	785,700	0	0	0	0
Health Care & Social Asst. (6)	334	91,795	0	0	334	233,660	0	0
Education & Rec. Service (6)	2,003	550,770	0	0	1,001	700,980	0	0
Other (7)	954	262,350	954	429,300	318	222,600	0	0
Total	10,678	2,936,340	5,613	2,525,625	10,065	7,045,640	2,056	822,400

(1) Assumes 275 square feet per employee.

(2) Assumes 450 square feet per employee.

(3) Assumes 700 square feet per employee.

(4) Assumes 400 square feet per employee.

(5) Assumes 350 square feet per employee.

(6) It is assumed that 40% of Health, Education & Recreation Service jobs are in the Healthcare & Social Assistance category based on the Alameda County employment average.

(7) Includes Information, Construction, and Public Administration.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

Table 31
Fremont Projected Workspace Demand (2010-2035)
South Fremont/Warm Springs Area Study; EPS#20050

Item	Institutional (5)		Med. Office/Instit. (1)		Other Workspace		Projected Building Sq.Ft.
	Jobs	Sq. Ft.	Jobs	Sq. Ft.	Jobs	Sq. Ft.	
Ag & Natural Resources	0	0	0	0	0	0	0
Manuf, Wholesale & Trans.	0	0	0	0	0	0	7,179,313
Retail	0	0	0	0	0	0	1,072,975
Financial & Prof. Service	0	0	0	0	437	0	2,586,263
Health Care & Social Asst.(6)	0	0	6,008	1652310	0	0	1,977,765
Education & Rec. Service (6)	5,007	1,752,450	0	0	2,003	0	3,004,200
Other (7)	3,180	1,113,000	0	0	954	0	2,027,250
Total	8,187	2,865,450	6,008	1,652,310	3,393	0	17,847,765

(1) Assumes 275 square feet per employee.

(2) Assumes 450 square feet per employee.

(3) Assumes 700 square feet per employee.

(4) Assumes 400 square feet per employee.

(5) Assumes 350 square feet per employee.

(6) It is assumed that 40% of Health, Education & Recreation Service jobs are in the Healthcare & Social Assistance category based on the Alameda County employment average.

(7) Includes Information, Construction, and Public Administration.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

Table 32
Projected Workforce Space Needs in Fremont*, 2010 - 2035
South Fremont/Warm Springs Area Study; EPS#20050

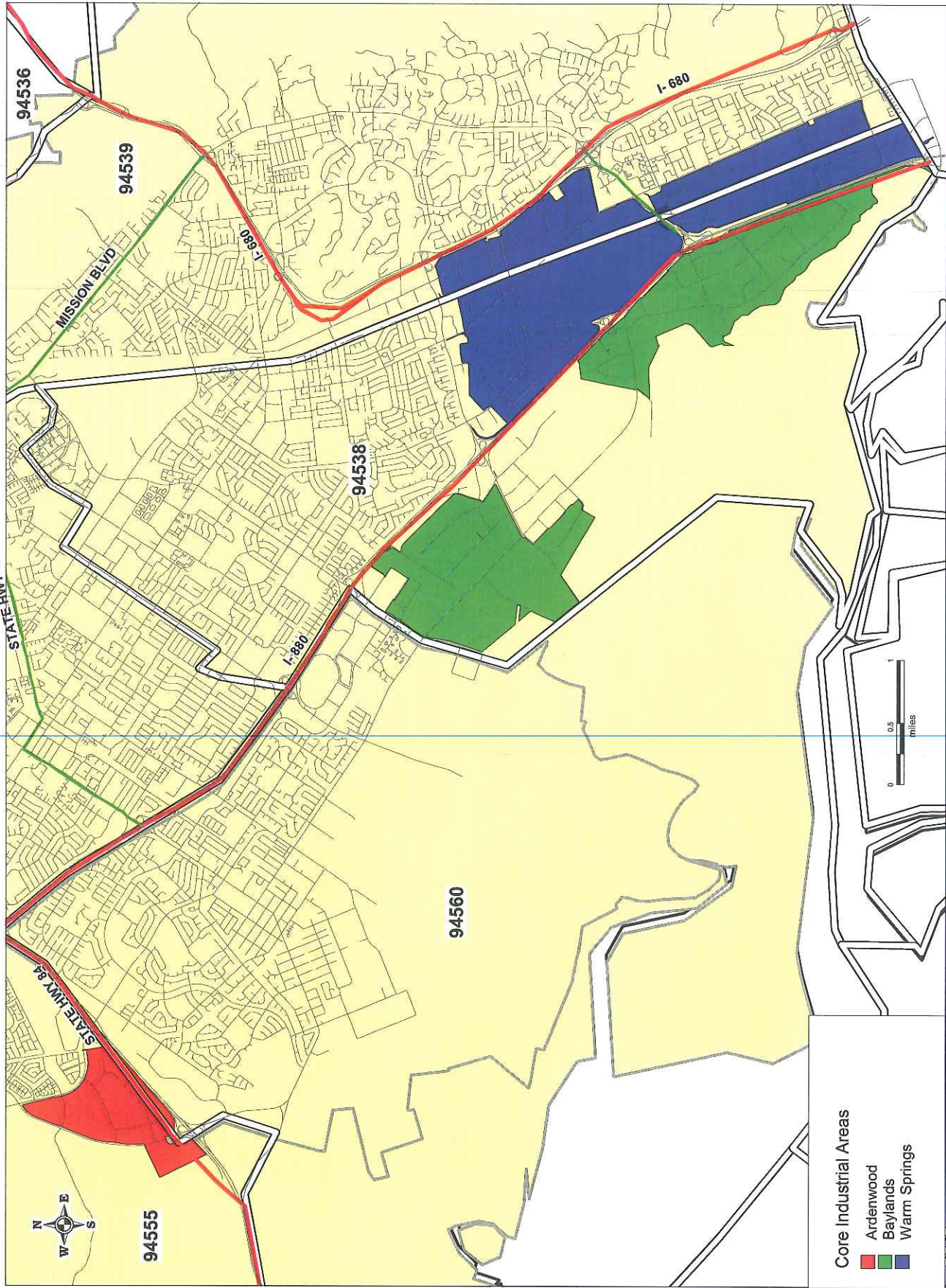
Item	Office	R&D	Warehouse/ Manufacturing	Medical Office/ Instit.	Other Instit.	Total
Jobs	10,678	5,613	10,065	6,008	8,187	40,551
% of Total	26%	14%	25%	15%	20%	100%
Building Square Feet (1)	2,936,000	2,526,000	7,046,000	1,652,000	2,865,450	17,025,450
% of Total	17%	15%	41%	10%	17%	100%

*Does not include retail.

(1) Rounded.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

Figure 16:
Core Industrial Areas



are removed.⁹ Because of the nature and size of Baylands and Warm Springs areas, these areas are divided into subareas, as shown in **Figure 17**. Parcel data characteristics for each area are described in **Table 33**.

Ardenwood

Located at the Highway 84/I-880 junction, Ardenwood is characterized by two- to four-story business parks with office, R&D, and manufacturing buildings. Since the 1990s, it has accommodated a large number of new businesses and developments and attracted many biotech and information technology firms. Ardenwood's prominent list of life science businesses includes Amgen, while companies such as Logitech comprise the information technology cluster. Ardenwood's other industries include professional and technical services. With over one million square feet of commercial space, Ardenwood Technology Park is one of the largest business parks in the City. Its tenants include Devry University, net.com, and Amgen. Ardenwood included about 5,500 driving industry jobs in 2007.

Ardenwood comprises approximately 350 acres, bounded by vacant land to the Northwest, with existing and planned residential development along its eastern border. Highway 84 divides the District from the City of Newark, where the former Sun Microsystems campus and additional business parks comprise a significant amount of office/R&D space. Although more than 1.1 million square feet of commercial space has already been developed by Peery Arrillaga and Sobrato Development Corporation to accommodate the growth of the 1990s, there is still a substantial amount of vacant land within the District.

The area's easy accessibility to the Peninsula, newer building inventory with 1997 as the median construction year, and availability of suitable space have historically appealed to many new businesses, the majority of which are in the biotech and computer and communications manufacturing clusters. Many tenants, driven by lower rents and flexibility of space, have relocated to Ardenwood from Silicon Valley and the Peninsula where workspace rents have been significantly higher.

Approximately 60 parcels comprising 350 acres are designated as the core industrial area within the district and are referenced in this analysis. With the average parcel size of 5.5 acres,¹⁰ the area has the largest parcel size and the newest building inventory out of the other subareas.

Baylands

For the purposes of this analysis, Baylands is broken into three smaller subareas, North, Central and South. Central Baylands is excluded from the industrial capacity analysis as a significant portion of the area has already been converted to retail uses including the Pacific Commons retail

⁹ Total acreage represents the sum of the parcels within the industrial area's boundary from the City parcel database. Acreage was not available for a small number of parcels.

¹⁰ Net acreage includes the specific area of parcels and excludes public rights-of-way, such as sidewalks and roads.

Figure 17:
Core Industrial Subareas

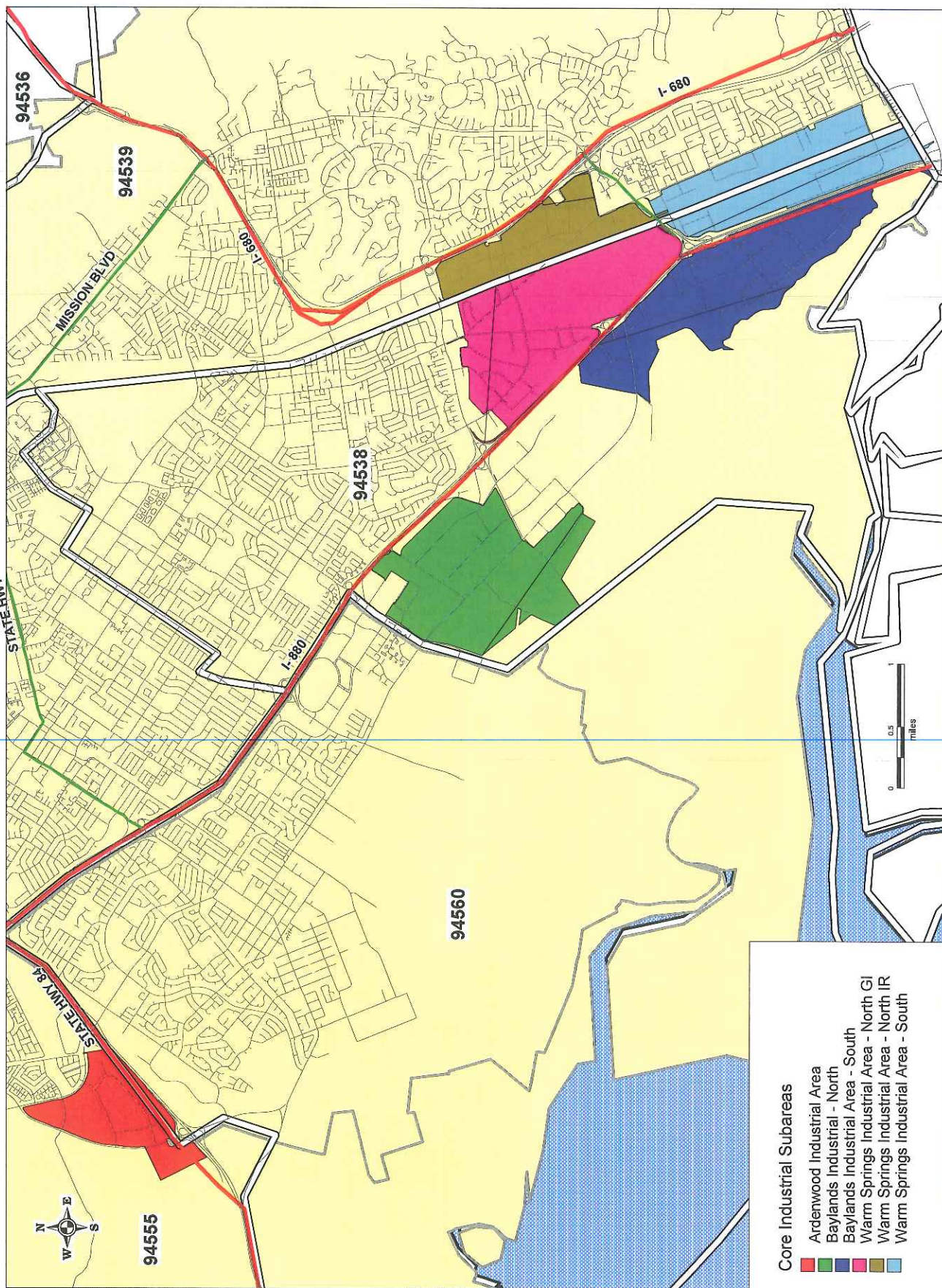


Table 33

**Industrial Land: Overall and Vacant Parcels
South Fremont/Warm Springs Area Study; EPS#20050**

Item	Ardenwood	Baylands		Warm Springs		Total/ Average
		North (1)	South	North GI (2)	North IR (3)	
Study Area Parcels						
Number	62	135	183	224	122	875
Total Acreage	345	785	632	696	462	3,470
Average Acreage	5.6	5.8	3.5	3.1	3.8	4.0
Median Year Built	1997	1992	1995	1980	1992	1991
Vacant Parcels						
Number	28	39	67	66	52	292
Acres	153	186	76	227	79	745
% of Total Acreage	44%	7%	12%	33%	17%	18%
Average Acreage	5.5	4.8	1.1	3.4	1.5	2.6

(1) Excludes 50 acres held by PG&E. Includes 133-acre CISCO Property (5 parcels) that had been part of the A's Ballpark proposal, which has since been withdrawn.

(2) Includes 161 acres by NUMMI.

(3) Includes 66 acres of vacant land comprised of 13 parcels that will include the future BART station.

Sources: City of Fremont; County Assessor; Economic & Planning Systems, Inc.

center and the Fremont Auto Mall. The combination of these uses will likely limit the potential for future industrial development and ultimately increase both the pressure and logic of the conversion of any remaining, contiguous vacant land to non-industrial uses.

Baylands Business District is accessible by I-880 and includes significant employment in a number of driving industries, including computer and communications manufacturing, distribution and logistics, biotech, and software and communications technology. Prominent employers include AsteelFlash, Lam Research Corporation and Boston Scientific Corporation. Employment in the driving industries was estimated at over 20,000 jobs in 2007.

The area's character is of a heavier industrial nature compared to Ardenwood, and has stronger economic ties to the I-80/880 Corridor as well as Silicon Valley. In particular, the northern part of Baylands around Stevenson Boulevard includes concrete manufacturers and other similarly heavy industrial operations. Areas along I-880 to the south tend to feature higher-end, single-story R&D/manufacturing buildings and office parks, the majority of which are relatively new. Baylands also includes highway-oriented retail centers along the northwest portion of Stevenson Boulevard. The majority of the district is located in a redevelopment area.

Baylands includes some of the largest business parks in Silicon Valley, such as Bayside Business Park and Bayside Technology Park. Pacific Commons, located on former industrial land, is also in the greater Baylands area and features large-format big box retail with tenants such as Costco and Kohl's. Despite ongoing changes, there are large undeveloped tracts of land still available in the north and south Baylands industrial areas. Amenities in Baylands include wider tree-lined streets and sidewalks. These amenities have historically appealed to heavier industrial uses, such as manufacturing and warehousing, though the mix of tenants has expanded to include semiconductor, biotech, engineering, logistics, and cleantech industries since the 1990s.

- **North Baylands.** The North Baylands subarea is located west of I-880 just north of Auto Mall Parkway. The area consists of approximately 135 parcels representing 785 acres, with an average parcel size of about 5.8 acres.¹¹ This inventory includes the 133-acre CISCO property which was previously encumbered in the A's Ballpark Project proposal, which has since been withdrawn. It is worth noting that an additional 50 acres of vacant land attributed to the PG&E site are excluded from this analysis since it is owned by the utility and likely to provide utility service to the region in the future. The median year of building construction is 1992. The subarea has been impacted by encroachments along Stevenson, Albrae, and Warm Springs Boulevard from retail and service uses.
- **South Baylands.** The South Baylands subarea is located along the west side of I-880 and south of Pacific Commons and east of Don Edwards National Wildlife Refuge. It consists of roughly 180 parcels accounting for 632 acres, with an average parcel size of about 3.5 acres. The median year of building construction is 1995. South Baylands has a newer building inventory and commands higher land values compared to North Baylands.

¹¹ Parcel number and acreage estimates include 133 acres of CISCO property (5 parcels) that had been part of the A's Ballpark Proposal, which has since been withdrawn.

Warm Springs

For the purposes of this analysis, Warm Springs is broken into three subareas: North General Industrial, North Restricted Industrial, and South, shown in **Figure 18**. Warm Springs is located in southeastern Fremont, between I-880 and I-680. The north portion of the district (north of Mission Boulevard) has been dominated by the NUMMI plant, which has been recently purchased by Tesla. The remainder of the district consists of a mix of warehouse space along Warm Springs Boulevard. The area south of Mission consists of low-rise R&D and warehouse space, with pockets of vacant and underutilized land interspersed between a mix of older industrial businesses and a few newer businesses.

Warm Springs has the highest employment in the driving industry sectors at about 35,000 jobs. Tenants in Warm Springs include a number of technology companies engaged in software, hardware, telecommunications, semiconductors, biotech, and clean tech. Companies include Western Digital, Stats CHIP Pac Ltd Thermo, Seagate Technology, Wintec, and Solyndra. Warm Springs employs significant numbers in the computer/communications manufacturing, distribution and logistics, and software and communications clusters.

Warm Springs is also home to a growing retail cluster along Automall Parkway, with the list of tenants including REI, Home Depot, Fry's Electronics, and Wal-Mart. South of Mission Boulevard, Warm Springs is bounded by older residential neighborhoods on the east, with some new residential developments being permitted and built on the former industrial land at the southern end.

The majority of the Warm Springs district consists of space with a traditional industrial character. Warm Springs has an older building inventory with 1983 as the median year of construction, which has resulted in a number of buildings becoming obsolete. The area has had the most affordable rents relative to the other core industrial areas in the City.

- **North/General Industrial.** The Warm Springs North/General Industrial area is located directly east of I-880, west of the railroad tracks, and north of Mission Boulevard. Its 700 acres of land are made up by 224 parcels with an average parcel size of 3.1 acres. Of the 227 acres of vacant land, 161 acres are associated with Parcels 1 and 3 from the recent NUMMI closure. Parcel 2 includes the 5.5 million square foot NUMMI factory on 208 acres recently purchased and partially occupied by Tesla. The median year of building construction is 1980. The subarea has the smallest parcel sizes and the oldest building inventory out of the core industrial subareas in this analysis, although its underutilized average parcel size is the largest.
- **North/Restricted Industrial.** The Warm Springs North/Restricted Industrial area is located west of I-680, east of the railroad tracks, and north of Mission Boulevard. It has a total area of 462 acres and 122 parcels with an average parcel size of 3.8 acres. The median year of building construction is 1992. This area will be home to the new Warm Springs BART station, scheduled to open in 2014. The new station will be developed on six acres with an additional 60 acres planned to accommodate future BART-related development.

Figure 18:



- **South Warm Springs.** South Warm Springs is located directly east of I-880 and west of Warm Springs Boulevard, and is bisected by the railroad tracks. Its total area of 550 acres consists of 150 parcels with an average size of 3.7 acres. The median construction year is 1984. South Warm Springs has seen a significant influx of uses not originally envisioned for an industrial area, including recreational, religious, and other activities.

Core Industrial Area Demand

The separation of the workspace demand is useful analytically, though in many cases mixes of uses will occur, such as office/R&D flex buildings or R&D/manufacturing buildings. At the same time, a portion of each of the space types will be in buildings with just one of these workspace types. The majority of R&D, manufacturing, and warehouse development will likely occur in the core industrial areas of the City, where existing industry clusters and infrastructure exist to support future growth.

Table 34 shows the conversion of the Citywide workspace demand into core industrial area workspace needs with the findings described below.

- **R&D.** Given the limited other locations for R&D development, approximately 95 percent or 2.4 million of R&D space is assumed to be captured within the core industrial areas. Applying a floor-area-ratio of 35 percent, this translates into nearly 160 acres of land needs.
- **Warehouse/Manufacturing.** All of 7.0 million square feet of the future warehouse and manufacturing growth is assumed to be captured within the core industrial areas. Applying a floor-area-ratio of 35 percent, these uses will require about 460 acres of land.
- **All Workspace.** Based on assumed capture rates of the core industrial areas and development densities, a total of 620 acres of land would be required to accommodate future employment and workspace growth in the core industrial areas in Fremont if no vacant building space were available and no redevelopment was to occur.

Vacant Space/Development Capacity

The development capacity assessment is based on parcel data available from the County Assessor, parcel-specific input from City staff, citywide brokerage reports, interviews with local industry professionals, tours of the industrial areas, and prior EPS analysis of industrial development capacity in other jurisdictions. This information is used to estimate industrial development capacity based on vacant land and redevelopable land estimates established in the Industrial Land Use Analysis for the City of Fremont General Plan (2008). As part of the analysis, the amount of available non-obsolete vacant building space that could accommodate new job growth and space demand is also included.

Vacant Building Space

A portion of the 9.4 million square feet of estimated building space demand over the next 25 years will be accommodated in core industrial areas through existing vacant space. While some of the vacant space is obsolete for some of the R&D and manufacturing functions of emerging technology companies, the majority of currently vacant space, likely over 75 percent of the existing vacant space, is not obsolete, representing about 4.9 million square feet of industrial space. Assuming an ongoing frictional vacancy rate of 5 percent of all industrial space,

Table 34
Projected Industrial Space and Equivalent Land Needs, 2010 - 2035
South Fremont/Warm Springs Area Study; EPS#20050

Item	R&D	Warehouse/Manufacturing	Total
<u>Net New Space Needs: Fremont</u>			
Building Square Feet	2,526,000	7,046,000	9,572,000
<u>Net New Space Needs: Core Industrial Areas</u>			
% in Study Areas	95%	100%	
Building Square Feet	2,399,700	7,046,000	9,445,700
FAR (1)	35.0%	35.0%	
Land Need (Acres)	157	462	620
% of Total	25%	75%	100%

(1) Based on FARs allowed under current General Plan in industrial areas.

Source: ABAG Projections 2009; Economic & Planning Systems, Inc.

representing about 1.8 million square feet, this leaves an inventory of non-obsolete vacant space of about 3.1 million square feet (8 to 9 percent of the space total) that could be expected to be filled by new demand over time.

Vacant Land

Vacant land represents the clearest indication of potential development capacity. Vacant parcels were identified as parcels with no or minimal existing improvement value from the City-adjusted parcel database. City staff also identified the PG&E vacant parcel not expected to be available for development in the foreseeable future (see **Table 35**). Developable vacant acreage is calculated by removing 10 percent of the parcel acreage, an estimate of undevelopable acreage associated with site size, configuration, or conditions. In total, the Ardenwood area includes about 140 acres of developable vacant industrial land, the Baylands area includes 235 acres, and Warm Springs include about 300 acres, of which about half are associated with former-NUMMI parcels 1 and 3.

Table 35: Vacant Industrial Land Capacity in Fremont

Item	Total Vacant Acres (1)	Developable Vacant Acres (2)
<u>Ardenwood/Baylands</u>		
Ardenwood	153	137
Baylands North	186	168
Baylands South	<u>76</u>	<u>68</u>
Subtotal	415	373
<u>Warm Springs</u>		
North - General Industrial	227	204
North - Restricted Industrial	79	71
South	<u>25</u>	<u>22</u>
Subtotal	331	297
Total	745	671

(1) See Table 34.

(2) About 10 percent of the potential capacity assumed not developable because of parcel configurations and sizes.

Sources: City of Fremont; County Assessor's Office; Economic & Planning Systems, Inc.

Redevelopment Capacity

Other capacity in addition to vacant land includes vacant and obsolete building capacity and underutilized land. The timing for redevelopment of this space is highly speculative and requires new development value sufficient to compensate existing owners for the value of their land and any ongoing building lease revenues. A detailed 2008 analysis of redevelopment capacity estimated minimal redevelopment capacity in Ardenwood with greater opportunities in Baylands .

Implications for Warm Springs Area

The overall demand for industrial space in the City of Fremont was estimated at 9.4 million square feet of building space, comprising about 2.4 million square feet of R&D space and 7.0 million square feet of manufacturing space and warehouse/distribution space. These estimates are based on ABAG's job forecast for the City of Fremont. About 3.1 million square feet of this demand could be accommodated in existing vacant building space, resulting in an overall net demand for 6.3 million square feet of new development. At typical industrial floor-area-ratios, this represents a demand for about 415 acres of industrial land (see **Table 36**).

The City has historically been able to capture significant levels of R&D, manufacturing, and warehouse development, in part because of its availability of large industrially zoned areas, vacant land, and in some cases large parcel sizes. Ardenwood has historically functioned as an area more directly tied to Silicon Valley, while Baylands and Warm Springs have links with both Silicon Valley and the I-80/880 Corridor and include a more diverse range of industrial uses, from heavier industry to R&D. The northern Warm Springs area to the west of the railway tracks also includes the major area with the most protected industrial land use designation, General Industrial.

In aggregate, the industrial land demand through 2035 of about 415 acres can be accommodated within the 671 acres of existing vacant industrial land across the three core industrial areas. From a land capacity perspective, this comparison suggests the potential to allow for some industrial conversions (recognizing that potential land use conflicts and other issues may limit the desirability of such conversions). As described in the previous section, Ardenwood and Baylands collectively provide about 373 acres of vacant industrial land. The vacant capacity in these areas alone is insufficient to meet the projected demand for industrial land through 2035. The re-designation of all or a significant portion of Warm Springs is likely to result in a constraint on industrial development in the City. The availability of industrial land in the Warm Springs area offers a broader range of alternatives to industrial developers/users, while also offering some small and large parcels for the expansion of existing industrial businesses and the attraction of new ones.

Future Office Development

This section considers the potential demand for office development (distinct from Office/R&D Flex or other office/industrial configurations) in the context of the potential locations in the City and draws baseline conclusions for the Warm Springs area.

Current Office Supply and Future Demand

The City's limited supply of tracked Class A and B office indicates a relatively low historical office development capture rate in the City of Fremont. This concentration is low relative to most other Bay Area job centers, such as Silicon Valley and Tri-Valley, though is consistent with many other central and southern I-80/880 Corridor cities.

The ABAG job forecasts suggest a potential demand for a total of 2.9 million square feet of non-medical office space with an additional demand for about 850,000 square feet of medical office space. A portion of this future demand is dependent on growth in other Fremont and surrounding City job sectors.

Table 36

**Net Demand for Industrial Land in Core Industrial Areas
South Fremont/Warm Springs Area Study; EPS#20050**

Item	Total
Industrial Land Demand	
<u>Total Space Needs</u>	9,445,700 sq. ft.
Building Space Demand in Core Industrial Areas	
<u>Vacant Building Capacity</u>	3,100,000 sq. ft.
Excess Vacant Space in Core Industrial (1)	
<u>Net Space and Land Needs</u>	6,345,700 sq. ft.
Net Land Needs in Core Industrial Areas	416 acres

(1) Based on assumption of a 5% frictional vacancy rate and a 25% obsolescence rate among vacant space.

Sources: Economic & Planning Systems, Inc.

There is currently an existing tracked vacancy of about 350,000 square feet of space, most of which is not obsolete. This implies a net demand for an additional 3.4 million square feet of office space (non-medical and medical) over the next 25 years or about 135,000 square feet each year. Based on historical trends in the City and other locations, up to one-third of this space demand, about 1.1 million square feet, might be in new Class A buildings. The remainder would be accommodated in new and existing Class B and C buildings, including some underutilized industrial buildings.

Existing Office Locations

Various workspace clusters are scattered through the City. Irvington, Niles, and Mission San Jose business districts support primarily retail and smaller office spaces. The more retail-oriented business districts also include some low-rise office buildings with smaller spaces accommodating healthcare, financial services, and real estate personnel tenants. The City Center and Centerville also include retail development, though with larger office clusters. The City Center represents the largest office cluster with the majority of the Class A building space and strong concentrations of health services (anchored by Washington Hospital, Kaiser Permanente, and Fremont Healthcare Center) and professional and financial services, including real estate, credit intermediation, and architectural and engineering services.

Midtown

The City is in the process of developing a flexible form-based plan for the Midtown area of the City, within the City's City Center. The plan is focused on creating a mixed-use district that includes new residential, retail, entertainment, and office uses. The plan provides the opportunity for the development of up to 1.5 million square feet of additional office development. With more limited opportunities for new office development in the City Center, the combination of Midtown's proximity to the existing concentration of health services/medical office and professional and financial services and its planned character and amenities will make it the preferred location of new Class A office development as well as new medical office space.

Implications for Warm Springs Area

Outside of the demand for office/R&D flex spaces and other spaces with office integrated with industrial uses, there are a number of constraints to the capture of significant office development around the Warm Springs BART station in the short to medium term. These constraints include (1) the overall demand for office space in the City, (2) the existing industrial character of the area, and (3) the competitive advantages of Midtown in capturing new Class A space and medical office development as well as the likely dispersal among the City's numerous business districts of the office demand for smaller spaces seeking to be integrated into a specific mix of businesses or neighborhood and/or seeking smaller spaces at more modest rents. Over the longer term, as the Midtown builds out, the Warm Springs BART station could become the preferred location for new, higher density office development. In the short to medium term, a catalyst beyond the construction of the BART station would likely be required to initiate office development, such as the development of a public/quasi-public office complex.